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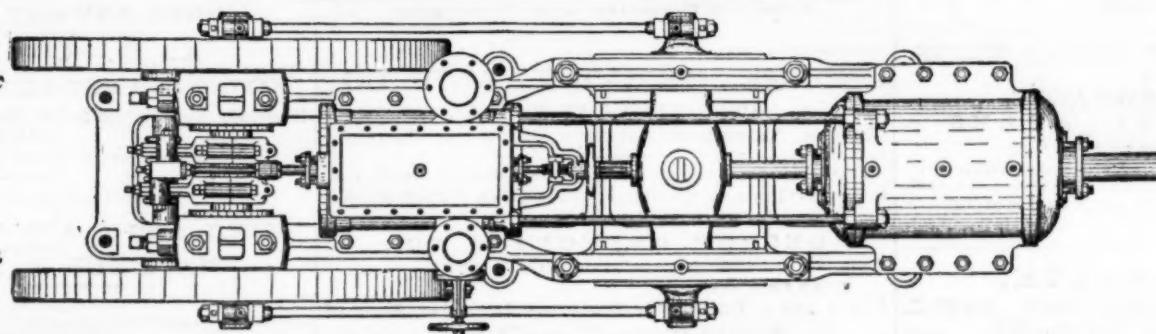
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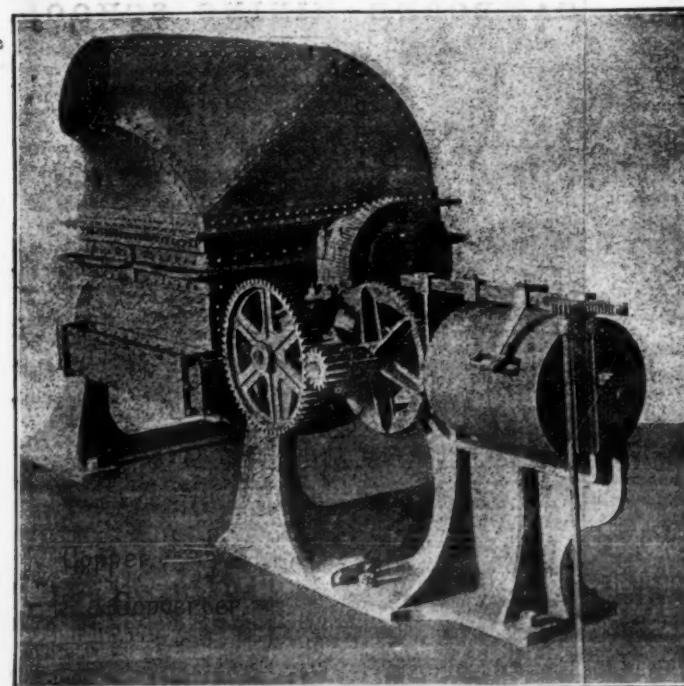
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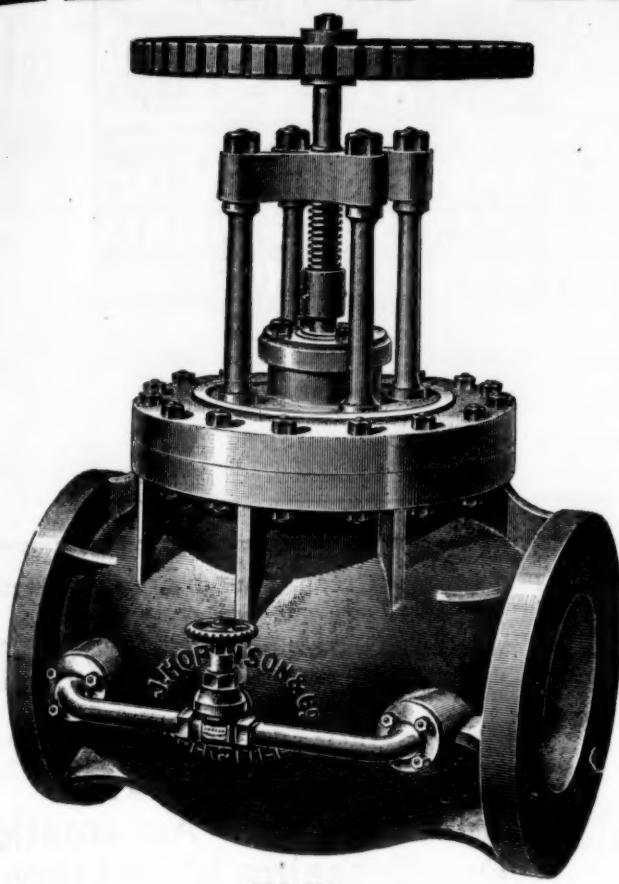


FIG. 119.

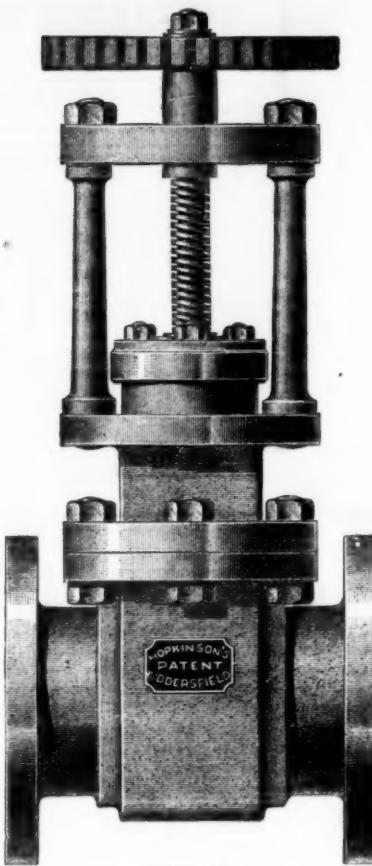


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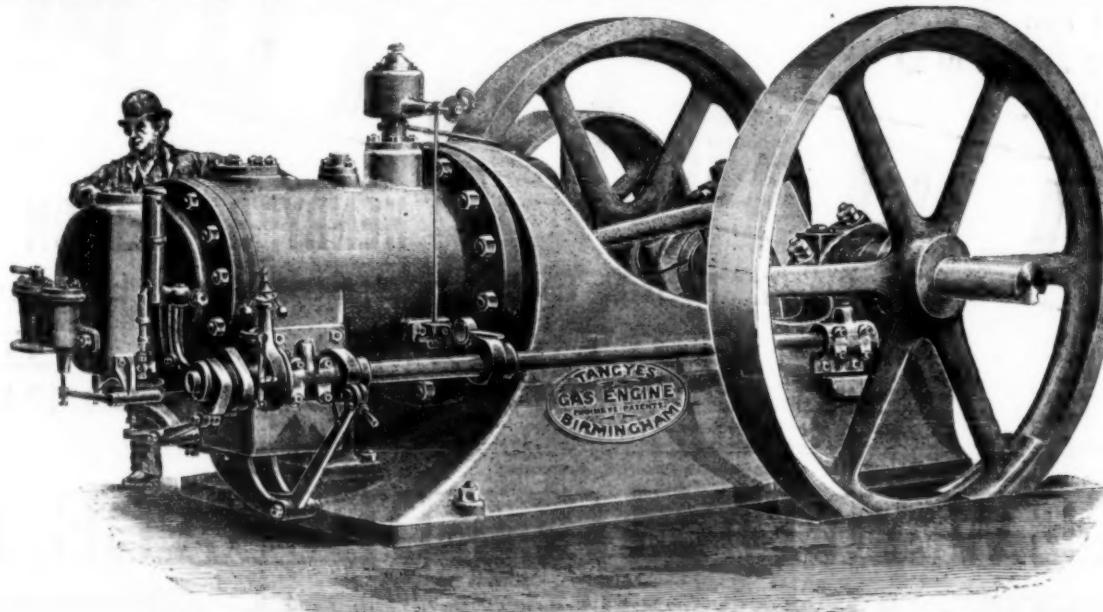
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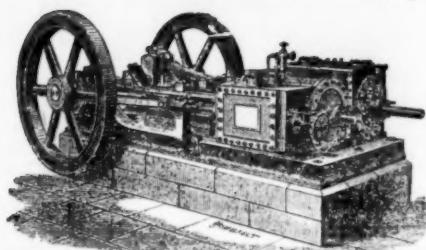
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ONLY AWARDS GIVEN FOR CONCENTRATION PLANTS

GEORGE GREEN'S PATENT Self-Acting or Automatic Ore Dressing Machinery,

A Special Plant, on a reduced scale, has been erected at the Works by which samples of METALLIC ORES—up to Five Tons may be treated, and the commercial value determined, in this way the most suitable arrangement of Plant is ascertained, a considerable advantage to intending Purchasers of Crushing and Concentrating Plant.

GOLD STAMP AND OTHER MILLS.

GEORGE GREEN,
THE FOUNDRY, ABERYSTWYTH.

FOR PURE ALUMINIUM

98 to 99 $\frac{1}{2}$ per cent. (98 per cent. minimum guaranteed) in

INGOTS, STICKS, & ROLLING SLABS;

ALSO FOR
SHEETS, &c., AND
FERRO-ALUMINIUM.

APPLY TO

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AGENTS FOR THE BRITISH ALUMINIUM COMPANY, LIMITED.

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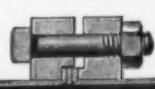
Light Lap-welded Wrought-iron and Steel Tubes

(SPECIALLY ADAPTED FOR MINES).

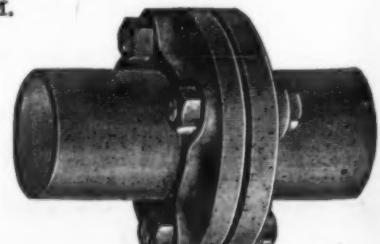
With Patent Flanged Joints (as illustrated) for the Conveyance of Water, Steam, and Air, at High and Low Pressures.

LAP-WELDED IRON AND STEEL BOILER TUBES
FOR LOCOMOTIVE, MARINE, AND OTHER MULTITUBULAR BOILERS.

STEEL & IRON PLATES FOR BOILERS, BRIDGES, &c.



SECTION OF PATENT FLANGED JOINT



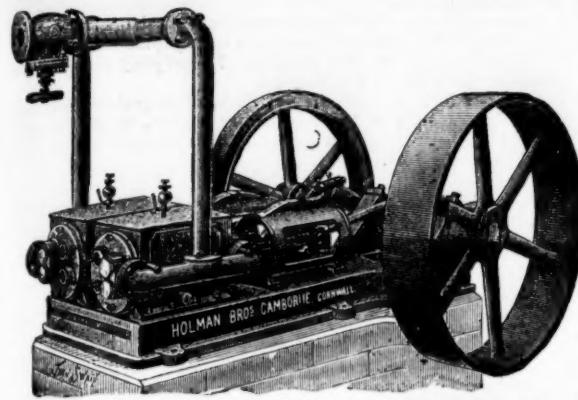
PLAN OF PATENT FLANGED JOINT.

Head Offices : 41, OSWALD STREET, GLASGOW.

HOLMAN Bros., Camborne, Cornwall.

ESTABLISHED 1839.

**Patentees and Sole Makers of
"THE CORNISH" ROCK DRILL and "THE CORNISH" COMPRESSOR.**



RECORD OF WORK DONE

At Botallack Mine, St. Just, Cornwall, **TWELVE MEN** with **TWO new Patent CORNISH ROCK DRILLS** drove, sunk, and rose **288 FATHOMS** in **12 MONTHS**, equal to five times the Speed of Hand Labour.

At Wheal Grenville Mine, Camborne, Cornwall, **SIX MEN** with **TWO new Patent CORNISH ROCK DRILLS** started from the **150 FATHOMS** level and put up in **EIGHT MONTHS** a **11 FEET** by **5 FEET PERPENDICULAR RISE 46 FATHOMS 5 FEET 6 INCHES**, and about midway drove **1 FATHOM 5 FT.** No communication of any kind was effected until hoisting to the Shaft brought down from surface.

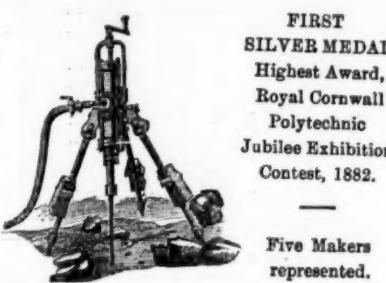
Estimates for **ROCK BORING PLANT** and **GENERAL MINING MACHINERY** on Application.

London Offices: 7 and 9, LEADENHALL BUILDINGS, E.C.

FIRST
SILVER MEDAL,
Highest Award,
Mining Institute
Contest, 1881.

Three Makers
represented.

AWARDED SILVER MEDAL INTERNATIONAL
INVENTIONS EXHIBITION, 1885.

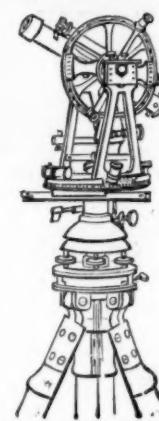


FIRST
SILVER MEDAL
Highest Award,
Royal Cornwall
Polytechnic
Jubilee Exhibition
Contest, 1882.

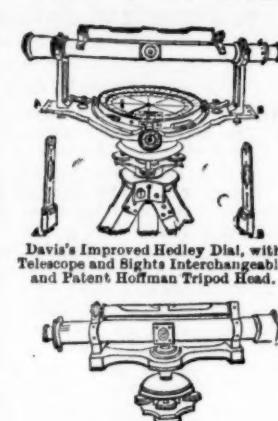
Five Makers
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ALL SAINTS WORKS, DERBY;
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Transit Theodolite with Patent Hoffman Tripod Head, and Trough Compass.



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Davis's Improved Hedley Dial, with Telescope and Sights Interchangeable, and Patent Hoffman Tripod Head.

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Davis's Improved Hedley Miners' Dials, with
HOFFMAN PATENT TRIPOD HEAD;
AND ALL DESCRIPTIONS OF MATHEMATICAL AND
MINING SURVEYING INSTRUMENTS.

Revised Illustrated Catalogues Free to any Part of the World.
SECTION (A) MATHEMATICAL DEPARTMENT AND SAFETY LAMPS,
SECTION (B) ELECTRICAL DEPARTMENT.

Gold Medal Awarded Mining Exhibition, 1890.
A. B. C. CABLE CODE, 4TH EDITION.

AWARDS: CRYSTAL PALACE, 1890; TASMANIA, 1891; KIMBERLEY, 1892.

CONCENTRATION.

The Clarkson-Stanfield Concentrator (Limited).

In the CLARKSON-STANFIELD process of Concentrating Refractory and Complex Ores no water is required; dust is reduced to a minimum; the loss of Mineral through water-borne Slimes is obviated.

OUTPUT $\frac{1}{2}$ TO 2 TONS PER HOUR, ACCORDING TO SIZE OF MACHINE.
CONCENTRATOR TO BE SEEN IN OPERATION AT THE COMPANY'S ONLY ADDRESS

6, COLONIAL AVENUE, MINORIES, LONDON, E.

The Machine is superior to Sieves for Sizing Homogeneous Substances, such as Emery, Sand, and Powders, and may be used to great advantage in the preparation of Ochre.

N.B.—The owners of the Carndochan Mine, near Bala, North Wales, will, by arrangement, show their CLARKSON-STANFIELD plant working on a Refractory Low Grade Gold Ore.

NEW PATENTS.

LIST of APPLICATIONS for New Patents relating to Mining Metallurgical, Engineering, Railway and kindred matters, specially compiled from official sources for the "Mining Journal" by Messrs Rayner and Company, Patent Agents, 37, Chancery Lane, London, W.C., who will forward all information regarding them free on application.

16377 Walter Lees, Commercial Street, Halifax.—Improvements in steam or water valves, the said improvements being also applicable to water gauges.—September 2.

16378 James Edmund Carroll, 60, Queen Victoria Street, London.—Improvements in furnaces and fire-grates.—September 2.

16379 James Galloway, 55, Low Street, Keighley.—Improvements in steam traps.—September 3.

16380 Robert Atkinson and John Earnshaw Leach, 29, Wycliffe Road, Shipley, Yorks.—Improvements in railway chairs.—September 4.

16381 John Mackenzie, 115, St. Vincent Street, Glasgow.—A swing bridge for railways.—September 4.

16382 Hugh Donald Fitzpatrick, 70, Wellington Street, Glasgow.—Improvements in miners' picks, pickaxes, and the like.—September 5.

16383 John Steel, Dixon Shanks, Thomas Harrison, and John MacCormac, 42, Brougham Street, Belfast.—Improvements in furnaces of steam boilers.—September 6.

16384 Johannes Pöleger, 47, Lincoln's Inn Fields, London.—Improvements in or connected with apparatus for extracting gold and silver from cyanide solutions by electricity.—September 6.

16385 Henry Shield and David James Howells, 15, Water Street, Liverpool.—Improvements in steam generators.—September 7.

SPECIFICATIONS PUBLISHED.

17888 Meldrum and others, furnaces, 1894; 17850, Keith, valves for hot water boilers, 1894; 17866, Bocher, locomotive boilers, 1894; 18003, Suliman, obtaining precious metals from ores, 1894; 18989, Sweet, steam and water separator, 1894; 18996, Brophy, water heaters and boilers, 1894; 18754, Booty, boiler furnaces, 1894; 20468, Solignac, steam generators, 1894; 21138, Schmidt, boilers, 1894; 22731, Lewis and others, steam boiler tubes, 1894; 5121, Spencer, valve and cock for boilers, 1895.

The above specifications published may be had of Messrs. Rayner and Co., 37, Chancery Lane, London, at 10d. each, including postage.

RUSSIA'S GOLD AND OTHER ORE DEPOSITS.—Some recent discoveries of gold have been made in the district of the Don, on the Nagaljnoje and the Nagaljachick estates, and from what has hitherto transpired the findings are worth working. The district in question possesses also deposit of zinc ore, silver-carrying lead ore, copper and silver ore, which have been to some extent surveyed and tested, and of which the regular working has in places commenced. As regards the gold, this is found in cracks which have arisen through some change or convolution of the ground, and have been filled with sulphur ore. One ton of ore contains on an average not less than 5 grains gold; specially selected ore has given as much as 17 grains gold. French engineers have found gold in several places, and after their departure a number of other gold-bearing veins have been discovered. Samples of ore taken in different directions have shown a greatly varying percentage of gold, and the dimensions of the veins differ also very considerably. Exhaustive examinations of the findings and accurate analyses of the ore are being continued. The average yield at present seems to be about 5 solatnik gold per 100 pood of ore, which corresponds with a proportion of 1 : 76,800. A regular working of the gold ore findings is about to be taken in hand.

JOINT-STOCK COMPANIES.

NEW REGISTRATIONS.

THE following are among the joint-stock companies registered at Somerset House since our last notice:—

Walworth Gold Mine (Limited).—Registered September 4, by J. H. Farmer, 25, Austin Friars, E.C. Capital £80,000, in £1 shares. Objects: To adopt and carry into effect an agreement expressi to be made between J. Crowder of the one part, and this company of the other part; to acquire any lands, mines, water and other rights, leases, claims, concessions, &c., in West Australia, or elsewhere; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metalliferous company in all its branches.

Barberton Gold Reefs (Limited).—Registered September 4, by Jordan and Sons, 120, Chancery Lane, W.C. Capital £100,000, in £1 shares. Object: To adopt and carry into effect an undetailed agreement; to acquire certain mines, mining and other rights, grants, claims, concessions, options, metalliferous land, and other property, to develop and turn to account same, in such manner as the company shall deem expedient, and generally to carry on the business of a mining, milling, and smelting company in all its branches.

Barberton Consols (Limited).—Registered September 4, by Jordan and Sons, 120, Chancery Lane, W.C. Capital £10,000, in £1 shares. Objects: To adopt and carry into effect an agreement, particulars of which do not transpire, for the acquisition of certain mines, mining rights, grants, concessions, options, &c., in South Africa; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metallurgical company in all or any of its branches.

Corderoy Syndicates (Limited).—Registered September 4, by Ingle, Holmes, and Sons, 20, Threadneedle Street, E.C. Capital £100,000 in £1 shares. Objects: To acquire freehold and other farms, properties, mines, grants, leases, options, metalliferous land, &c., in Africa or elsewhere; to develop and turn to account the same, and to carry on in all or any of their respective branches the businesses of miners, millers and smelters, farmers and graziers, &c.

Heidelberg Proprietary Mining Company (Limited).—Registered September 4, by Guedalis and Gross, 21, Essex Street, Strand, W.C. Capital £200,000, in £1 shares. Objects: To adopt and carry into effect an agreement between H. H. Greyham of the one part, and this company of the other part; for the acquisition of certain mining claims, mines, farms, grants, leases, claims, concessions, &c., in the district of Heidelberg, South African Republic, or elsewhere; to develop and work the same, and to carry on the business of a mining, milling, smelting and metallurgical company in all its branches.

French Exploration Company (Limited).—Registered September 4, by Linklater and Co., 2, Bond Court, Wallbrook, E.C. Capital £300,000, in £1 shares. Objects: To adopt and carry into effect an agreement between E. Cattani and H. Bolot of the one part, and this company of the other part; to acquire any concessions, rights, powers, privileges, &c., of any kind, over and concerning any property in South Africa or elsewhere, and to develop and turn to account the same.

Dixie Gold Mining Company (Limited).—Registered September 4, by W. H. Smith and Son, Grosvenor House, E.C. Capital £25,000, in £1 shares. Objects: To acquire freehold and other farms, properties, mines, water and other rights, lands, grants, leases, claims, concessions, &c.; to develop and turn to account the same, and to carry on business as land and mine owners, miners, metallurgists, metal workers, builders, contractors, engineers, &c., in all or any of their respective branches.

Cape Gold Fields (Limited).—Registered September 5, by Jordan and Sons, 120, Chancery Lane, W.C. Capital £100,000, in £1 shares. Objects: To acquire any lands, estates, gold or other mines, &c., in any part of the world; to develop and turn to account the same, and to carry on the business of a mining, milling, smelting, and metallurgical company in all or any of its branches.

Federated Mines Prospecting and Finance Company (Limited).—Registered September 7, by W. T. Hick, 2, Church Court, Clement's Lane, E.C. Capital £150,000, in £1 shares. Objects: To adopt and carry into effect an agreement made September 7 between G. W. Brookesby of the one part, and this company of the other part; to acquire certain stocks, shares, farms, mines, mining rights, grants, leases, claims, concessions, &c., and to develop and turn to account the same.

CONTRACTS OPEN:

FOR MINE, QUARRY, RAILWAY, AND ENGINEERING WORK, STORES, &c.

* * We shall be obliged by being promptly placed in possession of particulars regarding contracts open for competition, and of the results of successful tenders. In the latter case contract prices should be given.

The date given is that by which tenders must be delivered, in nearly all cases further information can be obtained on application at the addresses given. In applying for such the name of "The Mining Journal" should be mentioned as the original source of the information, concerning which further particulars are required.

HOME CONTRACTS.

Coal. September 23 (Beverley).—For the supply of coal for 12 months from October 1, for the Gas Committee, to be delivered, in full time to time directed, by and at contractor's expense, f.o.b. at Keadby, or at the pits, or at the railway station, Beverley, according to the terms of contract. The coal to be of the best kind well screened, free from sulphur, bats, blind, refuse, and dirt, and to be weighed (20 cwt. to the ton) upon the Corporation machine. Further information may be obtained of the gas manager, Mr. James Gibson, Gasworks, Beverley, and tenders, endorsed "Tender for Coal," must be delivered at the office of Mr. J. Willis Mills, Town Clerk, Gildthorpe, Beverley, by 23rd inst.

Lightning Conductors. September 24 (Leeds).—For providing and fixing several new lightning conductors and for replacing others, upon and at the workhouse premises in Beckett Street, for the Guardians. Specifications can be obtained on application at the Office. Tenders to be sent to Mr. John King, Union Office, East Parade, Leeds, by 24th inst.

Testing Bore. September 26 (Hull).—For putting down pump and supplying power for pumping 1400 gallons of water per hour for a fortnight for testing bore, for the Seafarers' Board of Guardians. Tenders to Mr. W. Jackson, assistant clerk, Lincoln's Inn Buildings, Bawllalay Lane, Hull, by 23rd inst.

Precipitating Tanks. October 7 (Cambridge).—For the construction of precipitating tanks, sludge tanks, press-house buildings, and for other works in connection therewith, for the Corporation. Drawings may be seen, and copies of the specification, quantities, form of tender, and agreement obtained, on and after 23rd inst., at the office of the engineer, Mr. J. H. Wood, M.I.C.E., 3, Cook Street, Liverpool, and 8, Alexandria Street, Cambridge. Sealed tenders, endorsed "Tender for Precipitating Tanks, Press-house Buildings, &c., Contract No. 2," to be delivered at the office of Mr. J. H. Wood, Town Clerk, Guildhall, Cambridge, before 5 p.m., on October 7.

Waterworks. October 7 (Kells, Ireland).—For the construction of waterworks to supply the town of Kells with water for the Town Commissioners. The works comprise the construction of service reservoir, filter house, pump house, and turbine pit, with the supply of turbines and pumps, lead pipes, and tail race, and the laying of several miles of 5 inch, 4 inch, and 3 inch pipes, with all valves, hydrants, and fountains, &c. Plans and specifications can be seen, and a general plan of the scheme, together with copy of quantities, can be obtained upon payment of £1 1s. (which will not be returned) either at the office of the engineer, Mr. J. H. Wood, M.I.C.E., Avenue Chambers, Belfast, or at the office of Mr. James J. Brady, Town Clerk, Town Hall, Kells. Tenders to be delivered in sealed envelopes, marked "Tender for Waterworks," and addressed Chairman, Town Commissioners, Kells, co. Meath, by 12 noon on October 7.

Pipes, &c. October 8 (Southampton).—For manufacturing and delivering in Southampton (1) certain cast-iron pipes and special castings; (2) certain sluice-valve, hydrant, and surface boxes; and (3) the carting, laying, jointing, and completion of certain lines of pipes, the fixing of valves and hydrants, and other work connected therewith, for the Corporation. Drawings may be seen, and specifications, conditions, and forms of tender obtained from Mr. W. Matthews, Waterworks Engineer, Southampton, upon payment of £1 1s. for each copy, which will be returned upon receipt of a bona fide tender. Separate sealed and endorsed tenders must be left at the office of Mr. Geo. B. Falder, Town Clerk, Municipal Offices, Southampton, by two p.m. on October 8. The contractors will be required to pay their workmen the standard rates of wages recognised in the various trades at the date of the contract.

THE MINERAL RESOURCES OF SOUTH STAFFORDSHIRE.

By HERBERT W. HUGHES, F.G.S. Assoc.R.S.M.,
Assoc. M.Inst.C.E.

(Concluded from Page 1103.)

THE method of mining the heathen coal and gubbin ironstone is to first drive out roads in the coal, subdividing the area to be worked into blocks from 40 to 50 yards wide, by 50 to 60 yards long. The heathen coal is then removed by longwall, working "homewards." When the coal face has advanced a few yards the gubbin ironstone lying above the "gob" or "goaf" is removed as follows:—The gob in the coal-working is not packed continuously across the face, but portions, called "wastes," are left unstowed. These wastes are about 3 yards wide, and are divided from each other by packs 5 or 6 yards wide. A hole is first broken up through the roof of the coal and into the gubbin measures in each waste, and then the gubbin measures are removed over the coal roof which has been underbuilt by the packing in the coal working face. Each gubbin hole is connected with its neighbour, and then the second face so formed is carried forward above and behind the heathen coal working. After this face has proceeded a short distance, a second set of gubbin holes are broken up through the heathen coal roof in advance of the previous ones, not only cutting off all the expense of maintaining the rear length of gubbin workings, but furnishing a more direct route for the haulage of the ironstone.

White Ironstone.—This is the most widely-diffused bed of ironstone in the whole district, having been worked from Bentley, on the north, to Old Hill, on the south. It consists of from two to three bands of stone, varying from 1 inch to 1 foot in thickness, interstratified with measures some 4 to 5 feet thick. As a rule, when one band of stone decreases in thickness there is an increase in one of the other bands, so that in general there will be found a total of from 9 to 18 inches of stone in the measures.

In the district south of the Wednesbury fault the white ironstone is the lowest bed from which ironstone has been gotten in any quantity, and upon which the principal dependence has been placed. The average yield per acre from a great number of cases gives the production at 2253 tons, the maximum having been 2970 tons and the minimum 1560 tons. The white ironstones vary considerably in their contents of phosphorus; from 0.3 per cent. in the Himley district, to practically nothing in the district around Woodside.

Between the Wednesbury fault and the Bentley fault the white ironstone is one of the uppermost ironstone measures worked, and much richer and more important beds being there found below it.

Sulphur Coal.—This is more often called the stinking coal, and is rarely used for household purposes on account of its impure sulphurous properties, but it is largely employed in the Gornal district for fire-brick burning.

New Mine Coal.—This coal has its normal development in the district around Bilston and Wolverhampton, where it is from 6 to 7 feet thick. In some places around Deepfields the seam is from 10 to 11 feet thick, but it gradually thins southwards until at Coneygre, a little north of Dudley, it varies from 4 to 6 feet thick. Southwards from Dudley all the bottom coals rapidly thin out, and finally disappear. In some of the sinkings in the south-western district, coals answering, perhaps, to the new mine and those below it have been passed through, but in so debased a form as to render their identification doubtful.

The new mine crops out to the surface before reaching the Bentley fault, but is thrown in again by that dislocation. On the north side it is divided into two, known as the Yard and Bass seams, which are throughout the Cannock Chase district separated by 15 to 17 yards of strata.

In the northern part the roof is a very good one, though heavy, but in the central division the roof gets very bad. This is, however, a very valuable seam, largely employed in the iron industry in mill furnaces. It contains too much sulphur for use in the blast-furnace.

Fireclay Coal.—The greatest development of this coal is also found between Wolverhampton and Bilston, where it is invariably from 8 to 10 feet thick. Southwards it rapidly deteriorates in quality and thickness, until at Dudley it does not exist in a workable form. North of the Bentley fault this seam is known as the Cinder coal.

In the earlier days of the iron industry a measure of ironstone known as the fireclay balls, which exist above the fireclay coal, was often mined, either separately or in conjunction with the coal. This stone was of excellent quality, and much prized for mixture with others for the manufacture of cold-blast pig. Attempts have recently been made on a small scale to reopen workings in this measure, but the cost of production has been found to be too large. An analysis of a specimen from Foxyards gave:—

	Per cent.
Iron	35.48
Silica	7.60
Phosphorus	0.052
Sulphur	0.010

Bottom Coal.—From Wolverhampton to Willenhall, Bilston, Darlaston, and Coseley, this coal has a pretty uniform thickness as below:—

	Feet. Inches.	Feet. Inches.
Gannes (inferior coal)	2 0	—
Top coal	5 0	—
Partings	—	1 0
Holers coal	4 0	—

Outside these limits the variations are many and sometimes come in suddenly. Even within the above limits, the parting between the holers and top coal generally increases at places, up to 4 to 5 yards, when it is then worked as a separate seam. South of Dudley, t^he coal, if it exists at all, is not more than a foot or so in thickness.

Northwards from Willenhall the bottom coal has a tendency to split up into divisions, but about Bentley the coals close together again, and at Birchills the seam becomes 12 or 14 feet thick, with only 8 inches of parting. Just south of Pelsall Heath, this 12 foot coal separates into two coals of 5 feet and 7 feet, which about a mile or so further north are 45 feet apart, forming the two seams known over the Cannock Chase district as the Shallow and Deep coals.

Blue Flats, Silver Threads, and Diamond Ironstones.—These are the lowest measures ever worked in the South Staffordshire coal field, and beneath which neither coal or ironstone of the least value has been found.

The Blue Flats ironstone was confined absolutely as a workable measure to the district between Wolverhampton and Walsall, scarcely going south of Bilston, nor so far north as Bloxwich. Around Bentley and Walsall not only does the Diamonds ironstone become as rich as the Blue Flats, but in between the two is found the "Silver Threads," containing several bands of stone in the intervening measures. The maxi-

mum development of these ironstone beds is given in the following section taken at Ryecroft, north of Walsall:—

	Feet. Ins.	Feet. Ins.
Blue Flats	Ironstone ... 0 3	... 1 0
	Blue clod ... 0 3	... 3 7
	Ironstone ... 0 8	... 10 0
	Ironstone balls ... 0 3	... 2 8
	White clod ... 0 3	... 3 0
Silver Threads	Ironstone ... 0 4	... 7 6
	White clod ... 0 3	... 7 0
	Ironstone ... 0 8	... 2 0
	White clod ... 0 3	... 2 0
Diamonds	Ironstone ... 0 3	... 3 0
	Blackclod ... 0 4	... 2 0
	Ironstone ... 0 4	... 3 0
		3 3 36 9

Further north the ironstones rapidly die out and disappear. Thirty years ago a great part of the iron smelted in the Wolverhampton district, which in those days was the largest centre, was made from these ironstone beds. At the present time there is not a single colliery working the deposits. This is due in some measure to the deterioration in quality of the beds, but chiefly to the increased cost of production, owing to the shortening of the miner's working day and the increase in wages, which makes it impossible to compete with foreign ores.

An analysis of a cold-blast pig to produce a given depth of chil, was as under, exceptional care having been taken in the selection of materials:—

Carbon	3.33 per cent.
Silicon	0.32 "
Sulphur	0.09 "
Phosphorus	0.27 "
Manganese	0.50 "
Iron	95.49 "

The percentage of phosphorus in South Staffordshire all-mine pigs usually runs about 0.50 per cent, but inasmuch as some of the ironstones which contain 35 to 36 per cent. of metallic iron show 0.6 to 0.8 per cent. of phosphorus, it is only by careful "blending" that the low average percentage of phosphorus can be maintained.

It is held by many authorities that this moderate percentage of phosphorus is the chief reason why South Staffordshire all-mine and similar irons give such good results in the best foundry practice, i.e., castings for engineering purposes, as cylinders, &c. It is noticeable that a moderate percentage of phosphorus is necessary in making chilled rolls. Although a chill can be obtained from hematite and other irons, from which phosphorus is practically absent, the chill is always soft, i.e., the surface of the roll made from such irons is soon roughened or indented when at work, and spoils the surface of the sheets, &c., in the manufacture of which it is employed.

The decrease in the total production of ironstones throughout the coal field is well shown by the figures given in the appendix, a shrinkage of 89 per cent. having taken place in the last 20 years.

Fireclays.—It has already been remarked that south of Dudley, the bottom seams of coal and ironstone are very inferior, and in the majority of localities unworkable. The Thick coal also deteriorates, more especially so in the south-western district. As a compensation for this disadvantage, the district contains several seams which have become celebrated throughout the commercial world under the name of Stourbridge fire-clay. These clays exist, excellent in quality, over a considerable area. In the early days of the industry the only bed worked was one existing some 8 or 10 yards below the white ironstone, and from 16 to 18 yards below the Thick coal. This is the so-called Old Mine clay, and on doubt the nearness of the town of Stourbridge to the first workings was responsible for the name of the manufactured goods.

The general section of the vertical strata thus requires considerable alteration so far as the south-western extremity of the coal field is concerned. Broadly speaking, the fire-clay district is bounded by the southern fault of the Brierley Hill trough on the north, the western boundary fault on the west, and the Netherton anticline on the east. The district, however, to the south creeps round the southern end of the Netherton anticline and extends westwards and northwards to Cradley. In the area under consideration, a good general section of the measures below the base of the Thick coal, applicable to the great majority of localities, is the one proved to exist at Bretton Lane, which is as follows:—

Intermediate measures containing the Gobbin Ironstone, Heathen Coal, White Ironstone, and Sulphur Coal in a very deteriorated form...	Feet
OLD MINE CLAY	from 4.6
Intermediate measures...	47
Beds (respecting the New Mine Coal)	2
FIRST NEW MINE CLAY	4.6
Intermediate measures...	48
SECOND NEW MINE CLAY	6
Intermediate measures...	32
Beds (probably the Bottom Coal)	1
THIRD NEW MINE CLAY	4.5

The great value of these clays lies in their refractoriness, owing to their freedom from alkalis and oxides of iron. Their composition is extremely variable. In the same location, in the same pit, and even in the same specimen, considerable variations are often to be found. One portion may be of a soft, mild, and inferior quality, while another is strong, clear, and very superior. For such reason great care has to be exercised in the selection of the superior qualities for the manufacture of glasshouse pots and crucibles; and for this purpose females are trained to become familiar with the various qualities. Sheds are erected for the reception of the best portions, the eye being mainly depended on for the selection, where, after being properly picked and scraped, the clay is carefully placed in heaps. The remaining portion, called "offal," is tipped in heaps like a spoil bank and allowed to disintegrate, thus exposing any impurities, which are afterwards picked out. This part is used for the manufacture of fire-bricks, gas retorts, &c.

Limestones.—Attention has already been directed to the outcrops of Silurian rocks, and to their presence beneath the coal measures.

The limestone of Hay Head, near Barr, has generally been regarded as the representative of the Woolhope band. This outcrop was extensively quarried at one time, but is not now worked. It was generally regarded as being well adapted for flux, being very free from phosphorus.

The Wenlock limestone is well exposed at Dudley, Hurst Hill, and Sedgley, and in the neighbourhood of Dudley is still largely mined by shafts. Extensive quarries were worked at one time in addition to mining, but owing to the decadence of the iron industry, the output is now comparatively small. Around Dudley the greater part of the production is still used as a flux in the blast-furnace; but at Walsall the lime is principally used for building and agricultural purposes.

The chief peculiarity of the Wenlock limestone in the Dudley district is its division into two beds, separated by a layer of shale. Both these beds are mined by separate workings, and owing to their proximity to the coal measures, South Staffordshire, some few years ago, was able to supply the unique example of coal, ironstone, and limestone being extracted from the same shaft.

The Aymestry limestone outcrops at Sedgley, Turner's Hill and at The Hays, near the southern end of the Netherton anticline. When burnt it produces a dark-coloured lime, locally called "black lime," which is largely employed in the district for hydraulic purposes.

Igneous Rocks.—The basaltic cappings of the Rowley Hills, and Powk Hill at Walsall, have been largely quarried for a great number of years, for the purpose of supplying macadam for mending the roads of the district.

The basalt is a hard, heavy, dark, close-grained rock, and generally consists of triclinic felspar, augite, magnetite, and olivine. The larger pieces are sometimes dressed square, and used as paving sets.

Appendix.

Output of coal and ironstone in South Staffordshire, from 1870 to 1894, inclusive.

Year.	Coal.	Ironstone. Tons.
1870	10,400,000	—
1871	10,500,000	—
1872	10,550,000	—
1873	11,100,000	340,644
1874	8,500,000	246,174
1875	10,300,000	384,055
1876	10,000,000	294,842
1877	9,500,000	206,452
1878	8,976,000	191,513
1879	9,329,197	149,204
1880	9,660,000	186,245
1881	10,058,670	198,069
1882	10,120,000	177,000
1883	10,304,800	150,179
1884	9,688,047	116,951
1885	9,862,497	117,726
1886	8,690,698	118,745
1887	9,019,106	110,162
1888	9,773,788	68,062
1889	10,119,276	62,051
1890	9,804,599	53,291
1891	10,153,907	58,433
1892	9,995,691	61,137
1893	8,970,820	51,572
1894	9,164,543	38,550

* Supplied by Mr. W. Beattie, H.M. Inspector of Mines.

MINING NOTES FROM JOHANNESBURG.

By H. BUSH, M.B.

George Goch.

The block of claims belonging to this company on the Eleazar Farm will turn out very valuable. Active development is being carried on, and the results are very encouraging.

United Main Reefs.

The 70 stamps are now at work. Mine developing splendidly Gordon Estates.

If the Main reef is struck in the bore-hole and gives payable results, there will be a sensational rise, and big profits will be made by those who will be lucky enough to get at the truth.

PARIS LETTER.

(FROM OUR SPECIAL CORRESPONDENT.)

English financiers and French speculation.—Advance in Rand mining shares.—English capital in Algeria.—A valuable new metal.

THE visit of Sir Edgar Vincent and of Mr. I. B. Barnato to this city has done much to improve the tone of the mining share market. Not that such an improvement was particularly needed, as the demand for scrip has been rather too active during the past fortnight to be sustained for any length of time, and it is advisable, now and then, that the market should lay under the passing influence of a reaction. The somewhat uncertain attitude of the Stock Exchange likewise counted for something in calming the spirit of speculation, and for a day or two there was a slight decline in all but the most prominent shares. It is significant, however, that these fluctuations are far less marked in Paris than they are in London, and, so far as the Bourse from being unduly influenced by the Stock Exchange, the Paris market has actually given the necessary stimulus, when needed, to the shares on the other side of the Channel. The apathy of the past few days, slight as it has been, is dispelled by the arrival of the two great financial magnates, who are said to be considering proposals in conjunction with several well-known Paris capitalists, that may have an excellent effect upon the Kaffir market. The chief object of Mr. Barnato's visit is to found a branch establishment of his bank in this city, and at the same time to bring his other ventures well before the public. So far, the Rand millionaire has been credited with giving the cold shoulder to French capital; but if he has done so in the past he is evidently ready to atone for his neglect. He states that he intends shortly to place a few shares in his bank upon the Paris market at the same price as they were introduced in London, and he will invite French support for his other undertakings which he is to bring out very soon. What these undertakings are is something of a mystery, but a light may be thrown upon them by the repeated references of Mr. Barnato to the great possibilities of development in his South African property. In a few days the Rand millionaire will leave for Vienna, and will then proceed to Buda-Pesth, St. Petersburg, and Brussels, where he will found branch establishments of his bank, and no doubt, as the result of this tour, a very active stimulus will be given to the interest in gold mining already being manifested throughout the Continent.

Except when the brokers proclaim a truce on settlement days, or when, for the same reason, there is very little buying and selling with London, the market remains extremely active, and, indeed, too much so for people who think that values have gone up quite high enough. Yet it is certain that the speculation is not so reckless or unreasonable as formerly. Buyers will no longer take up shares outside the immediate circle of gilt-edged securities at the prices recently quoted, and many of these have settled down to a level which fairly represents their proper investing value. The leading concerns, however, which are backed up by the influence of the great financial magnates, are commanding exorbitant prices, and the values are likely to advance still higher. East Rands are called for at a little over 291 francs, and they seem destined very soon to reach the three centuries. Charteredds are extensively dealt in at 231 francs, and a great deal is also being done in Ferrelas at 527·50 francs. After being left alone for some time Simmer and Jacks have suddenly advanced to 597·50 francs, while Transvaal Consolidated shares have also improved to 115·60 francs. Shebas, Kleinfonteins, Langlaagte, Geelenhuis, and Randfonteins are all upholding their position as sound securities. The only weakness in the market is the number of bogus shares that are being introduced in an unscrupulous manner. They are readily taken up by inexperienced investors, and if this practice is allowed to continue it may seriously compromise the position of the Kaffir market. To put an end to the machinations of the dishonest promoter several well-known capitalists have this week banded themselves into a sort of "ring" with a view of suppressing bogus concerns. At the next settlement a holocaust is to be made of the scrip that is known to be absolutely worthless, and it is hoped that this purification will do much to improve the tone of the mining market.

While investors continue to display the greatest confidence in the future of South African enterprise, the French Government is becoming more and more uneasy to the extent of considering ways and means for checking the progress of the speculation in gold mines. It is said that the Minister of Finance, the Minister of the Interior, and the Minister for Foreign Affairs are receiving reports upon the influence of mining speculation on Government stock. Certainly, the result is not likely to calm their apprehensions, for all sorts of Government securities have been completely ignored for months past; and, while gold mining shares have been rapidly advancing, the *Rentes* have become weaker and weaker. At no time has so little business been done in them. In view of this diversion of capital from native securities, which produce scarcely anything, to a foreign industry which offers the most solid guarantee of profitable returns, the Government has sounded a note of alarm to the effect that no less than 80 millions sterling of French money has been sunk in South African and Westralian ventures. A more independent estimate, however, places the amount at a much lower figure, and at the same time shows that the current value of the scrip held in France is about ten times what was originally paid for it, so that, so far, the French have made an excellent thing out of gold mining speculation. At the same time, it is thought desirable that something should be done to awaken public interest in purely national mining undertakings, but the efforts so far made to bring French mines to the front have not been successful. It is also proposed to resuscitate the old Mines d'Or de Faria, in the province of Minas Geraes, in Brazil, which, like all the other South American ventures run with French capital, has passed through very troublesome times. The mine is poor in gold, but the promoters think that a good profit may be secured by the employment of modern appliances. It must be confessed that they show more optimism than the investors, who do not seem inclined to subscribe the 900,000 francs necessary for the undertaking. In fact, promoters think nowadays that any moribund enterprise may be galvanized into life by the magic promise of gold; but, fortunately, the public is showing a little more circumspection. In Algeria, however, there is prospect of more success. An English company is said to have secured a concession of some auriferous territory, which was very favourably reported on some time ago by J. B. Dumas, the well-known chemical expert. The report attracted no attention whatever in this country, but a number of English capitalists considered that there was an excellent chance of making a good thing out of the development of the Algerian gold mines, and they have floated a concern under the title of the North African Gold Mining Company.

The many discoveries that have been made with the electric furnace and by other means during the past few years include one which is believed by metallurgists in this country to be destined to create quite a revolution in some branches of industry. Glucinium is a metal even lighter than aluminium, over which it possesses important advantages. It has a greater tensile strain than iron, and a higher electrical conductivity than copper, its quality in this respect being about equal to that of silver. It is thus particularly suitable for the manufacture of telegraph cables, in which the risks of breakage would be reduced to a minimum. As glucinium has not been experimented with upon a large scale, it is impossible yet to say definitely whether the laboratory tests will be borne out in practice, or whether it will share the fate of aluminium, which has fallen far short of the anticipations that were at first formed of it. No doubt something more definite will be known about glucinium before long, and if it proves to possess such marvellous qualities of strength and conductivity its manufacture will constitute a very important branch of industry.

A VISIT TO THE GOLD FIELDS ON THE HAURAKI PENINSULA, N.Z.

(BY A CORRESPONDENT.)

THE Northern Steamship Company's boats steam the distance between Queen-street wharf and Grahamstown on the Thames, a distance of some 56 miles, in about 4½ hours. Upon landing, one is immediately struck by what seems to be an unnecessarily long wharf, but a visit at low tide will easily explain the reason. The foreshore is rapidly extending seawards, and although the present wharf has more than once been lengthened, it is already too short to berth steamers except at high water. The Thames township extends about 1½ mile at the foot of a range of hills, or series of ridges and spurs, whose sides are dotted every here and there with drive, at the entrances of which lies the material the human burrowers have thrown out.

To-day there are signs of better times in store for the town, but the presence of numbers of ramshackle and dilapidated buildings tells its own story of a departed prosperity that once cheered the hearts of those who flocked to this land of Ophir. On November 21, 1769, Captain Cook landed on these shores, and after a few hours' stay, during which he collected a few specimens—probably of timber, as he makes mention in his Journal of trees of immense growth—he embarked, after calling the river the Thames, on account of its bearing some resemblance to that river in England. In July, 1867, gold was first discovered in a creek bed at the Thames in pieces of quartz, and on August 10, same year, Messrs. Hunt, White, Clarkson, and Cobb found a rich leader of auriferous quartz in the Kurunui stream. This led to the discovery of large quantities of gold in the Shotover, Moanataiari, Long Drive, Caledonian, and other claims. The dividend from the Caledonian claim in one year amounted to about £657,000. In those days many fortunes were made, which have since either found their way back again into the earth, or been broken against other than gold-bearing rocks. These famous claims are situated within a few hundred yards of the foreshore, on to which the tailings or refuse from the batteries found their way. There they have remained, and to-day they cover many acres to a depth of several feet. Until a few years back, the process known as wet crushing and silver-plate washing was the only one in vogue.

It is estimated that in some cases over 50 per cent of the gold was lost in the tailings. To recover this there are now on the Thames foreshore two plants of grinding machinery and pans capable of putting through over 200 tons of tailings per week, at a profit. In some cases this waste material has been turned over and over again, and each time paid for the trouble. In dealing with this accumulation of so-called waste material little manual labour is required, owing to the capital supply and pressure of available water-power.

The Thames town supply is derived from the Karaka creek, which has been dammed some 16 miles back from the town. For these 16 miles the water flows along a race before entering the cast-iron service main. There is an average pressure of 60 lbs. per square inch available in the town for working batteries and other machinery by means of the Pelton wheel, which has, in most cases, superseded the turbine. From the crushing-house to the particular place where the tailings are being worked an inclined flume or trough is built, with sufficient fall to prevent accumulation of sediment. The banks, sometimes 7 or 8 feet deep, are sluiced with water, the puddle is raised to flume by means of a water injector, and thus conveyed to the pans where it is crushed and then treated by mercury. The further saving of gold has, during the past six years, been greatly facilitated by means of the cyanide process. As the result of visit from Professor Black to the Thames some six years ago, the School of Mines exists to-day, and is doing a great deal through its teachings and experiments towards the future prosperity of the mining fraternity and the success of the mining interest at large on these fields. In Mr. James Park, F.G.S., and his assistant, Mr. Allen, the school has two very able lecturers and instructors.

The range of broken hills immediately behind the town is not more than 200 or 300 feet in height; behind these other peaks and ridges rise to a level of some 300 or 400 feet higher. The line of depression between the higher and lower land marks the course of what is known as the Moanataiari fault. Speaking of this fault, Mr. Park, in his paper on "The Mineral Resources of the Thames," says:—"It hedges or underlies to the south-west—that is, towards the harbour—at a uniform angle of 45°. This seems a very flat angle of inclination for so great a fault, but I have verified it in many places by personal observation and reference to the working plans of the mines situated on its course. Where the fault crosses hard rocks the striations and slickensides on the surface are often as fresh as if the faulting or sliding had only taken place yesterday. The enormous friction and pressure due to the sliding on the walls have crushed and shattered the rocks for a considerable width on each side of the fracture, and caused the formation of bands of stiff impervious clay lying parallel to the original line of fissure."

The whole evidence when taken together seems to point to a very recent origin of this great fault, and I am inclined to put it in the Newer Pliocene or older Pliostocene period."

During the writer's visit to the Thames and neighbouring fields the weather was so persistently bad that the opportunities of making a close acquaintance with the country lying beyond the first range were limited. As, however, there is great similarity in the general workings of mines, a short description of visit to the Moanataiari will convey some slight idea of the methods employed in getting the gold-bearing quartz.

Attired in borrowed clothes, and provided with a candle, we entered the main tunnel some 20 feet above the road level, and in face of hill rising from edge of footpath facing the foreshore, accompanied by Mr. Clark, the manager of the mine. The tunnel, which runs north-east and south-west, is ¼ mile long, 6 feet 6 inches in height, 7 feet wide at cap, and 8 feet wide at floor. Two lines of tramway are laid, having a gauge of 2 feet 4 inches and 14 lbs. rails. The present company's area is about 90 acres. From the tunnel to the first level is 150 feet; from this to surface of hill about 400 feet. The country through which the tunnel passes is what miners call "kindly," until the line of great fault previously mentioned is passed, hard rock is then encountered. Great difficulties were experienced when the fault face was reached, owing to the water, which poured in through the partition belt of broken rock. The distance between the two levels (150 feet) shows the vertical downward movement of the slide.

The roof of the tunnel is timbered over where the country is soft; green Kauri heart is in favour for this purpose. By the time we reached the top length of the ladder the perspiration was freely indicating that, at this special exercise, we were a novice. Our guide had warned us against looking up on account of the dripping water; one drop finding its way into our optic proved by its burning action the wisdom of his advice. The main reef crosses the tunnel at a very slight angle. The

plan followed for many years has been the prospecting and working of the richer leaders traversing the claim, but when the company have command of capital to prosecute their work on a larger scale, no doubt this main reef will amply repay. At present only some 50 men are working, and there is room for more than twice that number, besides payable ground for four rock-drills. For a description of the gold-bearing formation, an excerpt from Mr. Park's pamphlet will serve better than the words of an amateur miner:—"At the Kurunui or Shotover stream we pass on to the gold-bearing formation of the Thames gold fields, which extends without a break as far as Hope Creek, on the south, and stretches in a north-easterly direction into the upper valleys of Tararu, Puru, and Waiomo streams, where it extends northwards towards Mercury Bay. It is a noteworthy fact that wherever it is found it contains large, well-defined, payable reefs. It consists of alternations of soft, or moderately hard, decomposed andesites and bands of solid horobende and augite-andesite lavas, which pass imperceptibly into indurated tuffs and breccias. The decomposed andesites generally possess a characteristic yellowish-brown or grey colour, and form the kindly country of the local miners; while the solid andesites and tuff possess a greenish or dark blue or purple colour, and are generally known as hard colour. These alternating bands of soft and hard rock follow a general north-east course, and from the Kurunui hills to the Waiotaraka gully, possess a north-east dip, at angles varying from 40° to 70°." On the foreshore, near the Shotover valley, the Thames Drainage Board have their shaft and big pump, which drains to a 500 feet level. If the deep mining of well-known reefs is ever carried out more powerful machinery and deeper shafts will have to be used. There are not wanting those whose opinions are very strong founded, as they are, on experience extending over 20 years, who say that the Thames gold fields may be said to be, as yet, only in their infancy; that the surface has but been scratched, and that deep down, even below the sea level, lies wealth that only requires the key of capital to open the doors and let the captive free. To-day the hills facing the sea are quite denuded of their timber, but here and there a tree-root showing above ground tells its own tale. Over the crest of these spurs and ridges, however, there is heavy bush where the note of the Tui may still be heard, whilst the pretty little fantailed fly-catcher pursues his victims with graceful evolutions, as did his ancestors in the days when none but the Maori foot disturbed the stillness of the woods, and before the Pakeha dreamt of the wealth that the rocks have since been made to disgorge. Below and reached by a narrow track lies Tararu creek. Payable ground has been worked here for years, and in these days of renewed mining enterprise, when everybody who knows a good thing, or thinks he does, is pegging out claims, the reefs of Tararu creeks are getting their share of attention.

In the past the history of the Thames gold field has been that of comparatively small-monied companies. The natural consequence was that many claims were abandoned or worked by tributaries and prospectors with varied success. To-day the scene has changed and companies are daily being formed to secure a share of the foreign capital, which at home can find no profitable investment. By judicious selection of ground together with the amalgamation or buying-up of claims about well-known payable reefs, investors should be encouraged to provide that capital which alone is needed to carry these gold fields to a position of prosperity equal, if not greater than that occupied in their early days.

Some 10 miles beyond the Thames township is Puriri, better known from the mineral water which takes its name from this locality—a cold, effervescent water, having valuable properties from the presence of alkaline carbonates; it is bottled both as a still and aerated water—than from its gold. Can any good come from Puriri? Such is the question asked by men who have known and prospected the country about here as far back as 20 years. Opinions differ as to what the answer should be; but there are not wanting men to-day who have great faith in the future of these reefs, and not only are claims being rapidly taken up, but there is every probability of a share of foreign capital finding its way to Puriri.

Another 10 miles or so brings the traveller to Paerau, a small township which promises to become a flourishing place in a few years should the mining industry in the up-country continue to boom. Having already a water-way to Auckland, and a railway laid ready for traffic, which, in a roundabout way, also has its terminus at Auckland, Paerau will eventually become the distributing centre for a large area of country. The land between the river and the hill is mainly swamp, and would swallow up a deal of capital in draining, although what has been reclaimed is very productive.

No gold has been found in the immediate vicinity of Paerau. Between Paerau and Karangahaki there is a pretty good seam of coal, but not of first-class quality. Endeavours are being made to float a company to work this coal. One of the inducements held out to investors is that the value of the coal field must increase as the supply of available fuel for ore-drying purposes recedes further back from the place of consumption. There is some talk of lighting Paerau by electricity, there being an abundant supply of water-power close at hand.

After leaving Paerau behind some 4 or 5 miles, the surrounding country changes. No longer does the stream flow past low-lying land, as in the case of the Thames and Paka, which we have now lost sight of, to follow for some miles the banks of the Ohinemuri, whose waters are tinged and muddy from the solid matter they carry in solution as they hurry along their rocky course, at times dashing themselves agaist the huge boulders which, perchance, have lain for centuries after being displaced from some exalted position by mighty convulsions, or the slower, but no less sure, agencies of Nature. Before continuing our way on the main road, let us cross the stream and see what is taking place in and about the Waitapiti gorge. A little below the bridge which here spans the river, are situated the battery buildings of the Crown Mine. From this point, high up on the hillside, a tramway has been laid, which, after winding its way round the hill, follows the Waitapiti for about ½ mile or so until the tunnel is reached. Below and on the opposite of the gorge the Talisman and Woodstock mines have their batteries. These mines are situated on the high ground beyond the boundary ranges of the gorge. Overhead a wire tramway conveys the quartz and fuel down from a height of a thousand feet to the lower level. The Crown tramway has in places been cut into the hillside. Before the mine is reached the track has crossed and recrossed the gorge.

The output of quartz from the Crown Mine is about 400 tons per month, with a value of about £6 per ton. Against this, the expenses run from £1100 to £1200 per month. The Ohinemuri gold field has been open about 17 years. Here the distribution of gold is very different from that in the Thames district; the ore is of a lower grade, but the gold-bearing reefs are very much larger. Given more crushing and extracting facilities, the large though poorer reefs are more desirable. In one case, for every 20 tons of mullock or dirt 1 ton of quartz may go to the mill for £80 or £90; in the other, 20 tons of quartz may crush for £120.

Until a few years ago the old coach road lay further back from the river, missing the present site of the town, and threaded its way through deep and pretty gorges until it came to the river.

Some two miles beyond the junction of the old and the new road is Owharva, where a small battery at work proclaims that the district is gold-bearing. Another mile or two of road by the river's bank and our way lies over a track, or series of tracks, over the scrub-clad country to Waihi. At the time of our visit both road and tracks were billows of mud, in consequence of the heavy rainfall and the amount of traffic caused by the increasing fame of the Waihi and Waitekauri gold fields. One Auckland firm has seven or eight teams of six horses carrying between Paerau and Waihi. At points where the various tracks converge, the ploughed-up road is over 100 yards wide, with an average depth of mud about of 12 inches. The coach ride from Paerau to Waihi, a distance of 15 miles, is an experience never to be forgotten. On the so-called made roads the mud has swallowed up the metalling, and the huge boulders or points of the bedrock betray their presence by violently pitching ill-fated passengers from their seats at the expense of their spinal cords. To our left, at some distance, is a broken range of bush-covered hills whose front rank of blackened and maimed trees stretch forth their naked limbs, mutely protesting against the fire of an advancing army of settlers. To our left nothing can be seen for miles but scrub and ranpo swamp. The li-tree scrub, when seen from a distance, is very deceptive. A stranger viewing the undulating areas of dark green might well be forgiven if he exclaimed—what splendid pasture! and would be surprised to find, on closer acquaintance, perhaps 10 feet scrub. Before us, on a rising ground, is the straggling township of Waihi. Very little can be said in favour of Waihi as a residential place, but a great deal might be said of its condition at the time of our visit. The roads had their winter heavy coats of mud, but we were given to understand that when summer's sun shone these were changed for dust-coats. On the footpath sinners walk on slippery places, and the most progressive Christian runs the risk of becoming a stick-in-the-mud if he essayes to cross the road. In answer to a remark concerning the way in which "the severity of the weather pursued its course with incredible tenacity," an old inhabitant told the writer that he first came to live in those parts at the beginning of the wet season, 23 years ago, and he was afraid he would not live to see the end of it. Just beyond, and a little to the left of the present town, rise a few dome-shaped hills. Within a few feet of the surface of this elevated ground the now famous Martha reef lay almost neglected, as the ore was considered to be too poor to work, until a new prophet arose who showed the despairing ones that by a new treatment the previous difficulties in dealing with the refractory might be overcome, the unlimited supply of low grade ore to be turned to profit, and that out of what, under the old method, had run to waste, and accumulated near the old battery, and on the bed and banks of the creek, there was wealth which but required the magic touch of chemistry to reveal itself. Two Waihi companies have been in the field and retired before the successful present company, which to-day has 130 head of stamps, each pounding its daily ton or more of quartz, whilst a number of vats 20 feet in diameter are engaged in the cyanide process of saving gold. These vats have a wooden grating fixed at some small distance from the bottom; below the grating a strainer of canvas is placed. The powdered quartz is fed into these vats from elevators, and covered by a strong solution of cyanide of potassium and water, which, percolating through the powder, dissolves and carries off the gold. From the vats the solution passes into receivers, from which it slowly runs through a series of filter chambers filled with zinc shavings, which catch the gold from the solution as it finds its way to the sumps. Lower down the creek is the old Waihi, now the Waihi Silverton battery. From this to the mine three miles of tramway are in course of construction. From all accounts this company has capital stone to work, and plenty of it.

HANNAN'S DISTRICT, W.A. (HANNAN'S REWARD).—The most northerly point to which the main boulder lode has yet been traced is Hannan's Reward Mine, situated 4 miles south-west of the Great Boulder group. This claim, comprising 24 acres, has included within its boundaries the 6 acres pegged by Hannan, the discoverer of this wonderful district. Obtained originally as a reward for finding rich alluvial gold in the locality, it has during the two years which have elapsed since first claimed, yielded a big lot of the precious metal to both Hannan and his successors, and has now passed into the hands of one of the strong English companies which are so rapidly snapping-up all the rich mines of the colony. Like all the mines of the locality, it was originally worked for the alluvial, then for the cement, and, finally, as far as the prospectors are concerned, for the rich gold contained in the quartz veins at shallow depths. The bonanza hidden beneath the surface remained undiscovered, and it is only within the past two months that the immense lode, rich in gold, which is now exciting so much attention, was even suspected of being hidden underground. To the manager of Hannan's Reward, Mr. W. H. Corbould, and his able assistants, is due the honour of discovering what undoubtedly is the northern extension of the Boulder lode. It was first picked up in the main workings of the Reward Mine, but since then it has been learnt that the capping, rich in the precious metal, had also been disclosed by the dry blowers working in the ground owned originally by Hannan and party. The western slope of the hill comprising the mining claim is intersected by quartz veins running east and west into the north and south range. These were first worked on, and it was while opening the mine in a systematic manner and following the veins in the hope that they would lead into something better, that the big lode was discovered. In driving east at the 80 feet level the men broke unexpectedly into a big formation rich in gold. In appearance it closely resembles the big soft silver lodes of Broken Hill, and consists chiefly of decomposed porphyry and quartz. As much gold is visible in the faces as was silver in the oxidised ores of the Barrier, and wherever the veins of iron-tone and quartz occur the faces are simply smothered with the precious metal. The drive was carried through this formation until the western wall was reached, and along this a north drive was put in for a distance of 78 feet. The stone varies in richness in places, but will average several ounces all through. Very little is known about the reef save in the section exposed in the workings referred to, but with a view of testing the continuity of the lode a start has been made to tap it at a point 400 feet further north. A drift is being run in from Barnfield's shaft at the 80 feet level for this purpose, and by this means a much better idea of it will be formed. It will add enormously to the value of the property as soon as this has been accomplished, and within a few weeks the results of the test should be known. In the meantime, it is rather a pity the work of driving in the lode has been discontinued, even though the work might necessitate a second handling of the dirt brought to grass. The rehandling of such rich material a second time scarcely matters, and by driving and crosscutting in the formation a much better idea of the value of the great body recently discovered could more easily be formed. The sinking of the main engine shaft is being pushed on as rapidly as possible, and a depth of 220 feet has already been attained. This will be pushed down to water level, estimated to be a little over 300 feet, and as soon as it has been accomplished the reef will be tested in the lower levels. It is probable that the method of treatment adopted will be dry crushing by means of Krom rolls, mechanical separation of the rougher particles of gold, and cyanide for the extraction of the fine metal.—*West Australian Gold Fields Courier.*

On and after the 27th inst. share certificates of the VAN RYN NORTH EXPLORATION AND MINING COMPANY (LIMITED) will be ready for delivery in exchange for bankers' receipts on application and allotment.

MEETINGS OF MINING COMPANIES.

GOLD EXPLORERS, LIMITED.

THE first ordinary (statutory) general meeting of the Gold Explorers (Limited) was held on Tuesday, at the Cannon-street Hotel, under the presidency of Mr. G. F. TAVENOR.

The SECRETARY (Mr. F. W. Sellick) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—I have very great pleasure in meeting you this morning—the more pleasure inasmuch as it is to the board's gratification to inform you that the reconstruction and the progress of this company have been a marked success. We have now a clientele of some 250 shareholders, and a capital in hand of £8000, which we anticipate will be £14,000 within a very brief period, as the shares which were unallotted up to a certain point have been taken to the extent I have mentioned. I might say, on the subject of finance, that we think it more than likely that within a short period we shall have a total capital of £42,000 cash in hand, as the 110,000 shares which were reserved are already under treaty for purchase. Now, gentlemen, I need not inform you that those who have responded to our solicitation to join this company must know what they are about when they so actively strengthen our financial position as to give us a very large amount of cash for the purpose of pursuing operations. The next thing that I have to mention is the progress which your directors have made to further those operations, to consolidate the interests of the shareholders, and to increase the value of the share. We have had some admirable opportunities of acquiring certain properties, and we have selected one property in especial in West Australia, on the Premier line of reef—a line of reef which is identical with, and in the same position as, that of the Miner's Dream and other properties of a similar character existing at the 25 Mile post in the Coolgardie range. My attention has been drawn to the financial newspapers of the 17th inst., which state, in regard to the Miner's Dream, that a report has been received as follows:—"The most northern shaft, Miner's Dream, is 90 feet and over deep, making stronger, with fine and coarse gold, and the most southerly shaft, Gladstone Extended is 90 feet deep, reef 3 feet wide, carrying coarse and fine gold, like Miner's Dream. These shafts are fully 1/2 mile apart, and will give you a little idea of the value of the whole of these leases. The whole of the experts here speak highly of the properties in connection with the 25 Mile." Now, gentlemen, we have secured the option to purchase a property, and not the least important property, in this position. We have secured it on very favourable terms indeed, and we have cabled our agent at Coolgardie to inspect the property and send us a telegraphic report, in addition to mailing his report *in extenso*. So soon as this is done we shall issue the property to the public, and, having credentials such as it possesses of a first-class character, with large possibilities of a very generous return in gold for expenditure, we anticipate that we shall make for our small company a very considerable amount of profit. I may say that the property of which I am speaking has already a reef proved on both sides, so that the inevitable consequence seems to point to its passing through our-to-be-acquired property also. Now, gentlemen, if we succeed in this flotation, we shall have established for our shareholders without doubt a most admirable commencement for both profit-taking and future prosperity. The old saying, "Nothing succeeds like success," will, in our case, have borne great fruit, inasmuch as our shares have been eagerly subscribed for, our capital has been actually determined, and we have been placed in such advantageous connection with certain people that our West Australian ventures may become to this company a very large and a very important item in regard to giving them back a very large percentage for their holdings. In addition to the property contiguous to the Miner's Dream, we already possess, as you are aware, the Bayley's South Consolidated property, which is situated in the immediate vicinity of the Bayley's Reward. Since we acquired this property we have simply carried on operations to the extent of sinking shaft to prove the reefs at the depth at which they are expected to be struck. This is somewhat slow work, but it is a work which we all hope will eventuate in making a strike of a good character on this initial property with which we commenced our undertaking. I might add that the policy of your board has been to acquire from friends and connections in the West Australian fields every property of a good and solid character which could be acquired at a moderate and economical outlay, while at the same time we do not purpose entering upon any venture which is not recommended and backed up by people of mining experience on the other side. We have taken an interest, gentlemen, in two or three syndicates which have been brought to our notice, and in the advantages of which friends of ours have asked us to share: but as we have placed only a small amount in these—a mere trifle—at the present juncture I do not think I need dilate upon them. However, small as they are, they possess an eventuality of bringing in a little profit, and so show that we have not been supine or neglectful of the shareholders' interests. I need hardly inform you that when we float the 25 mile property—and present indications seem to denote that so soon as we are ready for the flotation its working capital will become absorbed without very much difficulty—we are not going to limit ourselves to the flotation of one company, but shall avail ourselves of the advantages which this present healthy position of the mining market affords to increase the interests of our shareholders in the most prudent and economical manner, for the purpose of securing the advantages which this very happy period of mining finance appears to assure us. I do not think I need go further into the subject at present. We have met simply to comply with an Act of Parliament, but I have given you, without any exaggeration, the position which we at present occupy. It is a very hopeful one. We do not assure you there is going to be wonderful success, but from the position as it is known to us at the moment we can assure you most truthfully that it presents all the attributes of a very successful start in the life of a new company, and I trust, gentlemen, it will be the duty of the board, as well as its pleasure, to meet you within a measurable period to inform you of the gratifying results of what I have just foreshadowed in my speech to you. (Applause.) If any gentleman would like to ask any question, or elicit any further information, I shall be very glad to respond to the best of my power. There is one thing I should like to add. There was a promise made to the shareholders that we should not go to allotment unless 75,000 shares were placed. As a matter of fact, under these auspices we have placed 95,000, which is 20,000 in excess. (Applause.) That only bears out what I stated just now. In thanking you for your attendance, it only remains for me to wish you a very prosperous and a very healthy competition in the mining boom which is at present raging in England, Paris, and other large centres generally, and I think with very just cause. (Applause.)

Mr. B. W. JONES remarked that no doubt all present were pleased with the statement the Chairman had made with regard to the prospects of the company. He (the speaker) believed it would become a successful company, and he believed that if it were to be so it would be under the present management. If it were not successful under their direction he feared it would not be successful under any other management at all. In conclusion, Mr. Jones proposed a hearty vote of thanks to the Chairman and his colleagues for what they had already done, and he also wished the vote to apply, in anticipation, to what the board would do for the shareholders in the future. (Applause.)

Mr. TAYLOR seconded the motion, and it was carried unanimously. The CHAIRMAN: We have, in return, to thank you, Mr. Jones, and the other gentlemen present for your kind feeling, and we only hope that our success in this undertaking will show you that we are deserving of it. (Hear, hear.)

Mr. VON BUCH said he might add to what the Chairman had told the meeting—that the board had held no less than from 28 to 30 meetings at which they had considered various schemes, and had

endeavoured to pick out those which would result to the best advantage of the company. (Applause.)

The meeting then closed.

WESTRALIA, LIMITED.

The first ordinary (statutory) general meeting of Westralia (Limited) was held on Monday, at Winchester House, Old Broad-street, Mr. PERCIVAL TIBBS presiding.

The SECRETARY (Mr. Arthur Hebdon) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—it is not often that the Chairman of a company, at its first meeting of shareholders, when he is called upon to speak on behalf of his colleagues on the board, has so agreeable a task set before him as I have to-day. The first or statutory meeting is usually regarded as an occurrence of a perfunctory nature, and it generally happens that, through no fault of the directors, the Chairman has little or no information to give the shareholders. We, however, are differently situated to-day. This company was, as you are all aware, organised in the early part of last month—the month of August—and since that time we have not let the grass grow under our feet. I may tell you that we have acquired a concession for the exclusive right of supplying electric light and power to the municipality of Coolgardie for 21 years. This concession we have resold to a company that was formed for the express purpose of taking it over from us, a company called the Westralia Electric Lighting and Supply Company (Limited) with a capital of £80,000, out of which £35,000 was devoted to working capital. This company is fully organised, and has already commenced operations, so as to fulfil the terms of the concession. Not to speak boastfully, we think it is somewhat of a feather in the cap of Westralia (Limited) that so young a company—a company that has not been in existence yet for 60 days—should have had the privilege of conferring upon the township of Coolgardie, which is the centre of the great mining industry of Western Australia, the great advantage of substituting for the present primitive method of lighting the latest mode of lighting that science has so far invented. We have also acquired a mining property in that district, upon which I am free to say, from what I have seen and from the reports that I have read, that there has been more development done than upon any property that has ever been either offered or floated to this date on this market. The reports are everything that could be desired, and we have so far advanced in our labours that we confidently expect to bring this company out before the public within the next two weeks. We have also just arranged the terms of purchase of another valuable property—a gold mining property—and have had guaranteed to us the whole of the working capital that will be required for thoroughly developing the mine upon that property. The whole of the capital of Westralia (Limited), as you probably know, is devoted to, and is absolutely working capital; not a penny-piece of promotion money has been paid or ever will be paid to anyone for the flotation of that company. (Hear, hear.) The company was formed—and whole of the capital now has been practically subscribed—for the special purpose of trading, if I may say so, in valuable properties in Western Australia—that is, buying them and reselling them, or floating them ourselves, as we think best, and as opportunity gives us a chance, upon the London market. That is the policy that your board of directors had to carry out from the inception of the undertaking; that is the policy which they have carried out to the present moment, and which they intend, as long as they remain in office, to carry out. It does not seem to me extraordinary, under these circumstances, that the shares of Westralia (Limited) are quoted at the premium at which they stand this day. I may tell you—you perhaps anticipating a question that may occur to some shareholder—that each of your directors, when he took office, subscribed for 1000 shares, and I need hardly add that—knowing what they do, they still hold them, and speaking on their behalf and for myself, I may say that we intend to stick to them, and to the good ship *Westralia*. (Applause.) I shall now be happy to answer any question that any shareholder may wish to ask.

Mr. BUMPUS: Can you give us an approximate estimate of the value of the business that you have in hand up to date?

The CHAIRMAN: Do you mean of the probable profit that would result to this company?

Mr. BUMPUS: Yes.

The CHAIRMAN: I could give it to you, but I don't know whether, if I told you, you might not think I was exaggerating a little. I may say, however, that the estimated profit that has already been made by your board on the contracts for this company comes to very nearly the amount of its capital. (Applause.)

Mr. WALKER said that after the interesting statement made by the Chairman he thought they must all go away with that feeling of satisfaction that most men who invested their money in a venture of this kind liked to have. There was no doubt that Westralia (Limited) was destined to make its mark in the mining market, and he hoped that instead of seeing the shares at the price at which they stood at the moment, they would soon see them standing at double. (Hear, hear.) He wished to propose a hearty vote of thanks to the Chairman and directors for the able manner in which they had directed the affairs of the company up to the present time (Applause.)

Mr. ANCELL seconded the vote, which was unanimously accorded.

The CHAIRMAN: On behalf of my colleagues more especially, and in a small degree on behalf of myself, I beg to return their and my thanks for the expression of goodwill that has been conveyed to us. (Applause.)

The meeting then terminated.

EMERALD (REWARD) GOLD MINING COMPANY, LIMITED.

An extraordinary general meeting of the Emerald (Reward) Gold Mining Company (Limited) was held on Wednesday at Winchester House, Mr. T. FYKE presiding.

The SECRETARY (Mr. J. Jameson Truran) read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—in the circular of July 15 we conveyed to you the contents of the cablegram which had then just been received, intimating that Mr. Stanley was shortly sailing for England to lay before the board a scheme in connection with the company's affairs. The scheme referred to in that communication was, of course, as we now know, the scheme before the shareholders as contained in the circular which accompanied the notice convening this meeting, supplemented by the letter and report from our manager, Mr. Porrill, in connection therewith, which also accompanied the notice. It is almost superfluous to add that the directors, in common with the shareholders, are very much disappointed at the result of the operations on the Emerald property since the company was started. At that time we had every reason to believe that we were in possession of a property which, though small in area, would make up for that objection by its richness, and there can be no doubt whatever that such was the opinion entertained throughout the colony in regard to this property. The result of the working, however, has unfortunately demonstrated—first, that the rich quarry stone has, for the time being, at all events, come to an end; also that the reefs which showed on the surface have not developed in depth into a permanent body of ore. The directors, under these circumstances, were much impressed with the difficulty of the position, in having to face the probability of an expenditure of what might prove to be a large sum of money in further development of a property which even if (which, of course, is by no means improbable) attended with eventual success would, on account of the small size of that property, practically involve the expenditure of the company's money, perhaps, for the benefit and ultimate profit of the owners of other adjoining properties. When the company was formed, the working capital of

£5000, then reserved, taking into consideration the fact that the company would be provided with a fully-equipped five-head battery, was deemed to be quite ample, having regard to what we then believed to be the reasonable certainty of being able to supplement our resources from the profits to be derived from the stone which we had every reason to believe would be of a rich character, besides being easily and inexpensively won. The want of success which we have so far experienced in this respect is, of course, a source of further disappointment on the question of funds, although, as a matter of fact, we have already informed you, the reserved working capital of £5000 is not only still intact, but we are actually in possession of about £1000 in addition thereto. Since Mr. Stanley's arrival, and referring to the report from our manager, the directors have most carefully considered the proposed scheme in all its bearings, and they have come to the conclusion that the company ought without hesitation to carry it out. As matters stand at the present moment, there appear to be three courses open for consideration. First, to endeavour to dispose of the Emerald property, and, without expending any further capital, to wind-up the company at once. Secondly, to proceed with the development of the Emerald property itself with a view to finding the continuation of the rich shoots as advised by Mr. Molineux. Thirdly, to carry out the scheme as now recommended to us, and the details of which are before you. As to the first of these considerations, you will, probably, agree with us in thinking that it is hardly desirable to discuss it, and if the choice must be—as the directors think it is—between two and three, every consideration seems to point to No. 3 as being the wisest one. Even, therefore, on the assumption that our principal operations were to be confined to a development of the Emerald Mine, it would certainly be wise to take this opportunity of securing so much of the adjoining ground while it can be secured for so small a consideration. On the other hand, our manager recommends these other properties to us in very strong terms as being able to supply us, without difficulty, with large quantities of ore, easily won, and which offer a good prospect of immediate profit, while we should be in the possession of a considerable quantity of ground, some of which may, in all probability, hereafter become of considerable value, and we can thus leave to a more convenient time the further development of the Emerald Mine, when, after the opening of railway communication, deep sinking operations will be able to be conducted with much less expense than is unavoidable under existing conditions. Mr. Porritt recommends this proposal to us unhesitatingly, and in a very confident manner. Being on the spot, he has had opportunities for months past of continual and close examination of these properties, so that the opinions he himself has formed are not those of any hurried or cursory inspection, but the result of most complete knowledge extending over a most considerable period. It may be asked, on the assumption that these further properties are acquired as proposed, how are the directors situated in regard to means, not alone for the acquisition of the properties, but also for working them? The actual acquisition of the properties will not be very serious; but, of course, the acquisition of so much extra ground will necessarily, to some extent, increase our working expenses, and we must be prepared to spend money in systematically developing them. Then, again, the battery now at the mine is not large enough to procure a satisfactory profit in dealing with ore of ordinary grade of richness; so that the advice of our manager to increase the battery is such as the directors would naturally expect, and would have at once occurred to them as necessary so soon as we are sure that we have large bodies of payable ore to treat. What is of course a difficulty is, that it is impossible at present to estimate, with any exactitude, what amount of money we may require to spend in development, as also what amount of profit we may derive from the treatment of the ore which appears to be immediately available. The board think it only right, therefore, to take this opportunity of pointing out to the shareholders that, while on the one hand we are in no immediate want of funds, it may be possible that at a later stage we shall find it necessary and desirable to raise further capital. So far as a rough estimate could be formed, the directors have calculated in regard to the scheme that their requirements might amount to some £12,000, or thereabouts. Towards this we have already £8000 in hand, which will carry us a long way, and, as already mentioned, we may, as events proceed, derive profits which will place us free from any financial difficulty. Taking all these circumstances into consideration, the board, therefore, do not consider it desirable at the present juncture to do anything further than draw the shareholders' attention to the possibility of further capital being required, as a necessary consequence of acquiring these further properties. I now beg to propose:—"That the board of directors be empowered to deal with the proposal put before them by Mr. Porritt, as they deem advisable." (Applause.)

Mr. J. H. STANLEY (one of the vendors) seconded the resolution. He first dealt with the fact of the results obtained having fallen short of the directors' expectations, and then proceeded to refer to Mr. Porritt's scheme. That the reefs were on the property he (the speaker) could vouch, as he had been repeatedly over the ground, and that they carried nice-looking stone he could also assert. Mr. Porritt stated that 5 dwts. would pay the cost of treatment, and if they got $\frac{1}{2}$ or $\frac{3}{4}$ ounce it would mean a handsome profit, and a profit that would continue for many years, so far as present indications were concerned; and there was always the possibility of finding a rich lode at any time, which would very materially alter the aspect of affairs. One feature, too, to be borne in mind was the fact that this gold field would shortly become a most important one as soon as the railway was completed. This should be in about nine months from the present time. The Government evidently had faith in the future of Yaigoo, and they had not hesitated to spend money in constituting it a separate gold field. Before leaving for England he laid the scheme before the local directors, Messrs. Parker and Venn, and it met with their approval, and a formal minute to that effect was sent home to the directors. Mr. Stanley continued: Assuming, therefore, that you decide to acquire these properties, the next step will be to thoroughly develop them before ordering our machinery. To this will probably take six months, and if during that time we have an opportunity of disposing of any of our land at a good advance, or letting it on tribute, the matter will be placed before the board for consideration. In six months' time the railway will be so far advanced that a considerable saving will be effected in the cost of transit of machinery, and we shall have a quantity of ore all ready for treatment. With 40 head of stamps we could safely calculate on crushing 500 tons a week, and if we recovered $\frac{1}{2}$ ounce, at a cost of £1 per ton, that would leave us a clear gain of about £750 a week, or £3000 per month. Mr. Porritt, you will notice, estimates that the ore will yield 1 ounce; but if we reduce his estimate by half, that would still leave us a profit of £2000 per month. I know how disappointing all estimates are, but it appears as if we have some margin here to come and go upon; and it is well known that the most successful mines in the past have been those that had low-grade ore to deal with, so that we may within twelve months find ourselves in a very strong position, and our shares quoted at a substantial premium. I would also remind you that we have still a large quantity of surface rubble to treat on the Emerald, and if this is done in a systematic way it should give excellent results. We have also about £7000 worth of tailings to treat, part of which assayed nearly 3 ounces to the ton, so that we can still go on earning gold to stand against our outlay for developing the other properties. Mr. Porritt intends, with this object in view, to make the utmost use of the present machinery.

After a brief discussion, the resolution was carried unanimously, and a vote of thanks to the Chairman and directors closed the meeting.

JACKSON GOLD FIELDS.—The gold mines owned by the Jackson Company, covering an area of 90 acres, have been developed by extensive workings, and at the 200 feet level, we are informed, a new large body of ore has been struck in going down on the lode. The gold is free milling, and the ore easy of treatment. We are also given to understand that the plant already on the property is ample, comprising a 60 stamp mill and all necessary machinery, which is driven entirely by water-power, of which there is an unlimited supply.

WITPOORTJE GOLD MINES, LIMITED.

The statutory meeting of the Witpoortje Gold Mines (Limited) was held on Thursday, at Winchester House, Mr. THOMAS WILKINS, C.E., presiding.

The notice convening the meeting having been read by the SECRETARY (Mr. Charles H. Goodman),

The CHAIRMAN said: Ladies and gentlemen—This is our first or statutory meeting, and, as a rule, shareholders are called together in conformity with the Act of Parliament, and simply told by the Chairman that there is nothing to report, except that the company went satisfactorily to allotment, and the meeting is at an end. I should, however, like, with your permission, to give you some particulars of your property, and sketch the policy of the board, so that you may better understand the reports which will be issued to you from time to time, as the development of the property proceeds. You are aware that our mines are only about 18 miles west of Johannesburg, that two good roads run close to or through the property, and that we are within 5 miles of the railway, very important features in the development of a mine; further, coal can be delivered on the property at about 20s. per ton; and last, but not least, we have a splendid water supply for all mining and milling operations which we may desire to carry out. We have what is known as a Main reef property, as I shall show you from the reports of the experts who have visited our and other adjoining properties. Three well-known mining men of the Rand have reported upon this property, and all three are unanimous in considering the claims very valuable. By-the-way, I ought to say the company owns 53 claims in one compact block, to the south of which is the farm Vlakfontein, and to the east the farm Roodepoort; on the latter farm the well-known mines Durban Roodepoort, United Main Reef, Princess Estate, and Blanket are situated; the Kimberley series of reefs have been exposed on the south of our property by trial shafts and cuttings, showing reef matter from 1 foot 6 inches to 4 feet wide. This series of reefs Mr. Guyas, the late manager of the Nigel Gold Mining and Heriot Companies, who reported on the property, says are always found south of the Main reef series. He says, "In going over the ground I plainly saw both of them." Mr. J. Tonkin, late manager of the Heidelberg Roodepoort Gold Mining Company, also says that "I am firmly of opinion that the Main reef runs through the block of claims under report, and further, that the reef dips right through the block." Speaking of an adjacent property, the Robinson McKinlay, he says:—"The main reef has already been struck on this property, a short distance to the north-east of the property under report, by means of a diamond drill, and a shaft is being sunk here at the present time;" and in concluding his report he says:—"Having regard to the indications that I have pointed out, I am fully convinced that this is a very valuable property." Another gentleman who reported upon the property, Mr. J. Dunneachie, says: "All the boundary ground is gold-bearing, that to the immediate south being the now famous Randfontein." He further says: "I know this district well, and I can assure you that it is one of the most promising on the Witwatersrand;" and further, "I have not the slightest hesitation in recommending this as one of the good mining propositions that have been submitted to me lately, and it should yield a handsome return in gold. I am confident it will prove to be a most valuable venture for the company that takes it in hand." I have merely given you the essence of what our experts say as to the property; but any shareholder who desires it can have copies of the reports referred to by applying to the secretary. I think I have said enough, however, to show you that it is the unanimous opinion of these three gentlemen that we have a Main reef property, and a very valuable one, too, and that we have all the elements within reach to enable us to make it a good paying mining enterprise. I don't think it will be detaining you needlessly if I just say, for your further information, that these experts are corroborated as to the Main reef running through the property by three others who reported on an adjoining block of claims (the Vanderhoff), which will be seen by referring to maps to be immediately adjoining our claims. Those three gentlemen are Mr. W. C. S. Hall, manager of the Champ D'Or Deep Level Gold Mining Company, Mr. John Farrant and Mr. J. S. Bowles, and they are unanimous in saying the Main reef runs through the property. I think I have told you all I can as to the value and position of the property, and I should now like to say a few words as to the policy of the board in developing it. What we intend to do is, first to open up and develop it, then to erect the machinery. In this policy we believe we have the shareholders with us, as we shall by this means have ore to crush before we erect our crushing plant. It would be unwise to do as some mines I could mention have done, and get the mill erected before they have any stuff to supply it with. The directors have the fullest belief in the value of your property, and that it is only a work of time to enable them to develop it in such a manner as to be amongst the best dividend-earning mines of this, one of the richest gold fields in the world. I need hardly say if any gentleman desires to ask any question I should be pleased to answer him to the best of my ability.

Mr. G. H. HOSKINS (director): When asked to join the board of this company I was naturally anxious to see what reports were issued from the experts—reports, a summary of which you have heard read this morning. One of those who has reported is well known to me, Mr. Richard John Guyas, late manager of the Nigel Company. I knew him in Cornwall, and also in Johannesburg, and can safely say that any statement which that gentleman makes upon mining matters, at least so far as his judgment goes, can be relied upon. As to his judgment, I do not think there is any man on the Rand whose reputation stands higher than his. He believes in the property, and he would not speak as he has done if he did not. You will have gathered from his report that the Main reef runs through the property of the Witpoortje Gold Mines. I have some little knowledge of these reefs, and the Main reef and the Kimberley series, and having had a look at the plans, I quite corroborate, so far as my experience goes, the reports which have been issued by these gentlemen, and I fully believe that we have a very valuable property. I have no doubt that in the course of a very short time after development we shall have tangible evidence that the property we possess will be equal to some of the best on the Rand. I hope that time will not be very long distant, and that we shall reap a valuable harvest from our connection with this property. (Cheers.)

Mr. LAVENDER: I should like to move a resolution, which I am sure will meet with the cordial assent of every shareholder present. We have been treated to what in these days is very much appreciated—that is, to a concise statement as to the business position of the matter in which we are all deeply interested. It is at times necessary to go into precise details, and at others to present a precise statement, but the latter is the one which best serves our purpose to-day, and we have had it. You, sir, have given us reason to go away with a conviction that the confidence which induced us to subscribe to the capital of this company was not misplaced, but that it will shortly yield a satisfactory return. I will imitate your example of brevity, and simply move a vote of thanks to you for your explicit and able statement.

The motion was seconded and carried unanimously.

The CHAIRMAN: Gentlemen—I am very much obliged to you for this cordial vote of thanks. I hope that when I have the honour of addressing you upon a future occasion I may be met by you just as cordially as I am now, and that nothing may have transpired to cause you to remove your confidence from your directors, and that you will be equally satisfied with what we shall then have done. (Cheers.)

LILLOOET, FRASER RIVER GOLD FIELDS, LIMITED.

An extraordinary general meeting of the shareholders of the Lillooet, Fraser River and Cariboo Gold Fields (Limited), was held on Wednesday, at Winchester House, Old Broad-street, E.C., for the purpose of increasing the capital of the company, appointing additional directors, and altering the Articles of Association.—Mr. R. M. HORNE-PAYNE presiding.

The SECRETARY (Mr. Edgar A. Bennett) having read the notice convening the meeting,

The CHAIRMAN said: Gentlemen—I very much regret that there are not more of our directors present, but the other members of the board are, as you know, resident in British Columbia. Some of them have been over here recently, but they have had to return, especially Mr. Barnard, in order to look after the company's business. I am aware that many of you have been taken by surprise at being called here to-day for the purpose of increasing our capital to such a very large extent as that of which we give you notice in the summons to attend the meeting. I am also aware that some of the newspapers have criticised the amount of new capital which we ask you to give us as being out of all proportion of the old capital, and unreasonable in the absence of detailed figures, and, moreover, unreasonable inasmuch as the new capital required is more than should be prudently expended on properties which we have acquired with the old. I am here to-day for the purpose of opposing our resolutions, will have made up their minds to give us their hearty support. Since the formation of this company your directors have energetically carried out the objects for which the company was formed, and which we described in the prospectus. In the first place, we were so fortunate as to secure the services of Mr. D. T. Hughes as mining superintendent, a gentleman of great experience, bringing with him the very highest recommendations, and a most successful record from California. Your directors have already experienced the benefit of his excellent judgment, and feel that under his guidance the company's mining operations will be economically and successfully continued. Meantime your company has obtained possession of all the properties mentioned in the prospectus, with the exception of one lease, with regard to which, after very careful investigation and the sinking of further shafts, Mr. Hughes reported that the prospects did not warrant the expenditure of capital necessary to work it, but advised, if possible, obtaining from the same vendors certain other properties of theirs in the immediate vicinity, and found more valuable. This has been successfully accomplished; the new properties have been thoroughly and carefully examined, investigated, and proved, and so far promise exceedingly well. From week to week Mr. Hughes reports on both more and more favourably. One appears to be a valuable gravel gold mine, and the other consists of two claims on a gold quartz reef, which assays an average of 2 ounces to the ton, free gold, and which, owing to its convenient location, Mr. Hughes says can be worked at a cost of not more than 25s. per ton by the ordinary crushing process. The value of these properties was practically ascertained by Mr. Hughes before their acquisition, and his opinion has since been amply justified. Whilst developing with all possible energy the Lillooet properties, your board have also devoted their energies to prospecting and the examination of claims and mines throughout British Columbia, and have succeeded in securing several very promising properties, which have been developed, assayed, and sufficiently proved to amply justify their being worked on a large scale. They have been mostly acquired on the principles which your directors have adopted throughout, and believe in adhering to, that is, without the payment of any cash, but by giving the vendors a reasonable interest in the future profits of their respective properties, or, in some cases, paid-up shares in this company. Your directors have selected six of these properties as being the most promising. They consist first of a property comprising six mineral claims, or 240 acres, on which a shaft has been sunk 400 feet deep, and which is tapped at the bottom by a tunnel 650 feet long. Drifts and crosscuts have been run on the 50, 100, and 200 feet levels, exposing about 26,000 tons of ore, valued at £5 per ton. 300 tons of this ore shipped to the Selby Smelting Company at San Francisco yielded a gross return of £12 per ton. This property has the great advantage for working of being situated within a few yards of the main line of the Canadian Pacific Railway, and, though not of a very high standard, the ore is so easily treated that it ensures an excellent return. In addition to its being on the railway, there is an excellent market for the ore pending the erection of milling and smelting works of our own, as there is a first-rate market for this quality of ore amongst the milling and smelting companies of the United States and Western Canada, who send their agents up to the mouth of the mine and buy it there at a price per ton which will yield a handsome profit to your company. During the course of our development and investigation works there has been extracted, and there is at present on the dump, something like 2000 tons of this ore ready for market. The second property which your directors have selected is one comprising four mineral claims of 72 acres. The reef has been proved to a depth of 100 feet, and is 22 feet wide at that depth. Altogether about 1000 feet of tunnelling and drifting have been done on the property. Special care has been spent on testing this, and over 40 different assays, milling tests, &c., have been made. The ore taken from wall to wall, and without selection, under the personal superintendence of your vice-Chairman, yields about 1 ounce (17.01 dwts.) per ton in gold, with traces of silver. The tailings are easily concentrated, and can be readily treated by the cyanide process. From tests made by the Cassell Gold Extraction Company an extraction of 95 per cent. of the assay value is certified to. Mr. J. Champion was appointed by the Government of British Columbia to investigate this property on behalf of the Department of Mines, and reported that the quantity of ore in sight was at least 100,000 tons, and the average assay value on 16 tests gave 1½ ounce to the ton, while 100 lbs. of unselected ore treated by a milling test demonstrated that, properly handled, the ore would yield about 13 dwts. per ton, at a cost of 8½ dwts. for working expenses. The third property selected by your directors is a mineral claim of 40 acres on a gold quartz reef, on which a shaft of 100 feet has been sunk and crosscut at the foot, by which the reef has been proved to be 10 feet wide, and of an average value of 18 dwts. per ton. The fourth property comprises a mineral claim with certain exten-

sions granted under the law of British Columbia, about 80 acres in all, upon which a tunnel of 100 feet, with a crosscut of 50 feet, has been sunk, showing a well-defined fissure vein 7½ feet wide, giving an assay average of 1½ ounce to the ton. Of this the British Columbia Gold Commissioner for the district says in his report:—"This claim shows the best defined quartz yet discovered in the district, and is 7½ feet wide. The extensions are also well defined, and have been uncovered near either end of the location, which represents a considerable amount of work, but entirely proves the continuity of the reef." The fifth property is one containing three mineral claims of 120 acres, upon which a considerable amount of work has been done, showing the property to be of a high grade gold and copper bearing reef, from which 16 tons of ore shipped to the Chicago Copper Refining Company resulted in a gross product of 0·368 ounces of gold, 200 ounces of silver, and 7566 lbs. of copper. The Chicago Refining Company, in commenting upon this shipment, stated that the ore was of a very high grade, but that it had not been properly sorted, and contained a great deal of gangue rock which should not have been included in the shipment, and if omitted, would have increased the grade materially. Your directors have reason to believe that this property will very likely turn out to be one of the richest on the American continent. It has been proved to be of enormous extent, and there is a free market for the ore in its present condition at the mine's mouth. The smelters of Chicago, Helena (Montana), Seattle (Washington), and other places are anxious to secure it. The sixth and last property selected is a leasehold of about 1000 acres granted by the Government of British Columbia of auriferous gravel deposits, upon which there are a great number of old workings, the result of the labours of hand washers, and which have evidently yielded gold in early days to the crude processes then available. This ground has been sufficiently tested to show the value to be not less than 50 cents to the cubic yard, and a small investment of capital in the erection of a monitor, and a comparatively small amount of fluming, is necessary to make it a paying property. Four of these properties have been acquired by the formation of subsidiary companies under the law of British Columbia, in which the vendors and discoverers, who are the local miners, will receive a reasonable proportion of the stock, in consideration of your company finding the capital to develop the mines if, and so far as, they think it desirable. With regard to two of them, in the development of which the discoverers had already expended over £7000, and which could not be obtained on the above terms, a provisional agreement has been arranged by your directors to purchase them for £7000 in the fully paid shares of your company, should the extension scheme which we propose be duly passed. At the present moment a gold boom is raging; miners are rushing into the country in thousands, and the attention of the world is being drawn to the vast mineral wealth of the country that is being brought to light. Our company, fortunately in the field 12 months before the rest, and assisted by the energetic and loyal efforts of its experienced British Columbia directors, has prosecuted its efforts with eminent success, and we believe we have secured some of the most choice properties that have yet been brought to light in this Province. We have also every reason to believe that with our organisation secured in the capital which we ask you to authorise us to arrange for to-day, assisted by the sympathy of the people, and aided by the support of the Legislature of British Columbia, we shall be able to continue the successful exploration and exploitation of this vast field of mineral wealth. Amongst those who have recently issued a report of the investigations of the country stand forward prominently Professor Sir G. M. Dawson, K.C.M.G., F.R.G.S., Director-General of the Royal Geological Survey of Canada, and Mr. John B. Hobson, one of the most prominent experts of the West, who were selected by all the great mining companies of the Western United States to represent them before the United States Congress, at Washington, on the mining question. Professor Dawson says, in a paper read before the Royal Colonial Institute:—"The Cordilleran belt, or Rocky Mountain region of North America, forming the wide western rim of the continent, has, whenever it has been adequately examined, proved to be rich in the precious metals as well as in other ores. This has been the case in Mexico and in the Western States of the American Union. Though some parts of this ore-bearing region are undoubtedly richer than others, generally speaking it is throughout a metalliferous country. There is no reason whatever to believe that the particular portions of British Columbia now, for the first time, opened to mining by means of the Canadian Pacific Railway are richer in ores than other parts of the Province. On the contrary, what has already been said of the Cariboo district affords *prima facie* evidence of an opposite character. The Province of British Columbia alone, from south-east to north-west, includes a length of over 800 miles of the Cordilleran region; and, adding to this the further extension of the same region comprised within the boundaries of the Dominion of Canada as a whole, its entire length in Canada is between 1200 and 1300 miles. This is almost identical with the whole length of the same region contained within the United States, from the southern boundary with Mexico to the northern with Canada. Circumstances have favoured the development of the mines of the Western States of the Union, but it is, as nearly as may be, certain that the northern half of the similar region will eventually prove equal in richness to the southern, and that when the mines of these western States may have passed their zenith of productiveness, those of the north will be still in rearing in this respect. The explorations of the Geological Survey of Canada have already resulted in placing on record the occurrence of rich ores of gold and silver in various places scattered along the entire length of the Cordilleran region in Canada, and though so far as we have to chronicle only an awakening of interest in the southern part of British Columbia, these discoveries stand as indications and incentives to further enterprise to the north. While the remote and impracticable character of much of this northern country places certain obstacles in the way of its development, on the other hand the local abundance of timber and water-power in it afford facilities unknown in the south, which will be of importance whenever mining operations have actually been set on foot." Mr. John B. Hobson, in the course of his speech before the Chamber of Mines in San Francisco in December, 1894, said:—"I have seen in British Columbia, included in only the three districts of Lillooet, Fraser River, and Cariboo, three times the area of auriferous deposits that are known to exist in the whole State of California. I do not hesitate to predict that the day is not far distant when the gold output from British Columbia will astonish the civilised world." The directors have succeeded in obtaining the guarantee of amply sufficient capital to work your present possessions, and they have also succeeded in obtaining perhaps the strongest financial backing which it is possible to have in all Europe. Amongst the new directors whom we ask you to elect to-day will be seen the names of certainly two of the best known European bankers and financiers. They need no words from me to recommend them to your favourable consideration. The position of the company which Mr. Rosenheim directs, or assists to direct—namely, the Anglo-French Exploration Company, and his equally successful connection with other companies, have proved an ample introduction for his name on the British market. Baron de Machiels' name is

sufficiently well known throughout Europe to make it unnecessary for me to refer to him. In Dr. Goldschmidt we have a scientist and a geologist of the very highest order, and in Mr. Forbes George Vernon, the present representative of the British Columbian Government in this country, to whose zealous and indefatigable efforts as Agent-General we largely owe the fact that we ever came to consider the extension of our enterprise, and the development of British Columbian resources, and who was for seven or eight years Minister of Public Works in British Columbia, we have one of the very first men of local experience and judgment. But if amongst our new directors we have men of great financial position and name, I can assure you that they are merely types of the gentlemen who have put together their money to subscribe our new capital, and there are many other names on the list of equal celebrity. When your directors had made up their minds that it was for your best interests that we should extend our operations on a large scale, they consulted their brokers in London and in Paris as to how this might best be done, and your brokers organised a syndicate to guarantee new capital, in which they themselves, showing their good faith in the enterprise, have taken a very large share, and in which your directors have also taken a very large share. I wish particularly to draw your attention to this fact. You will at once realise that it would practically have been impossible to carry through the scheme if your directors had not come forward and shown their confidence in it by putting their hands into their pockets in no mean way, and I may tell you that one of your new directors has subscribed £30,000 of the new capital, another one has subscribed £20,000, whilst I myself have induced my firm and friends in this country to put up £40,000. I do not mention this with a desire to advertise the fact, but because there is an option attached to this subscription on the same lines that have already been adopted by the great British South Africa Company, and because we hope that when in twelve months this option matures, by our efforts we shall have made the shares of your company worth perhaps £4 or £5 a-piece, and I do not wish you to be able then, or even to think, then, that we had been guilty of a breach of our trust in making a profit out of the shares of the company. I wish you particularly to note the facts in connection with this matter, and to note them well and for good and all, and I may add that if any shareholder here would like to take part in guaranteeing the subscription of capital, it is not too late for him to do so, and if he will call on me after the meeting, I will arrange for him to have as large a share of this responsibility, with its contingent reward, as he desires. The syndicate will be managed by your company's Paris financial representatives, the senior member of whose firm is proposed as one of the new directors, and they are prepared to guarantee the subscription of half of the new issue—namely, £100,000, if it should not be subscribed forthwith by the present shareholders, on condition of the syndicate having for one year the option of taking at par the remainder of the new issue. These are practically the same lines already adopted by one or two of the most celebrated and successful South African companies, and I am confident that the shareholders to-day will feel and agree with me that they are fair and reasonable terms. Owing to the important increase in the business which it is proposed your company should undertake, we feel that we should have a larger directorate, and we therefore ask you to increase the number of directors from five to nine. We also ask you to ratify the action of your board in negotiating with Mr. Frank S. Barnard, M.P., to act as managing director of this company, and take charge of its executive affairs in British Columbia, at a salary of £1000 per annum. I feel sure that the shareholders will not only not hesitate, but they will congratulate themselves on the opportunity of electing and securing the services of men of such calibre and European reputation as those to whom I have already referred as being proposed as the new directors. I am sure also that the shareholders will feel that it is only just that we directors, who have hitherto acted for you with no salary or recompense whatever, saving only the large interests which we have in the shares of your company, should ask for some definite remuneration henceforth, considering the fact that we shall now be called upon to give a great deal of our time and our very best services to the direction of a large enterprise. I shall therefore ask you to vote a resolution granting us a minimum salary of £200 each per annum. As this in itself will be a very small recompence for the time and work which we shall be called upon to give to your affairs, we shall ask you to give us, to divide amongst us, 10 per cent. of all the profits we shall make for you, after a dividend of 10 per cent. cumulative, has been paid on the shares. In conclusion, I may say your directors consider that the company now embraces every element of success and every element necessary to enable it to become one of the great enterprises of the day. It has a vast field of practically unlimited mineral wealth, the sympathy and support of the Province, great railway facilities, ample and cheap water, coal, timber, and labour, an invigorating and good climate, ample capital for its present necessities, and a directorate containing some of the most experienced and successful local men, whilst from the powerful financial connections represented on its board, it has the assurance that it will always have ample means at its disposal to continue successfully its operations. Finally, your directors have reason to believe that the Legislature of British Columbia, being fully aware of the keen competition of other countries to secure capital for the development of their industries, will recognise the efforts of this company to open up the mineral resources of the Province, and extend to it every encouragement and legitimate assistance. I trust, gentlemen, that when the time again comes round to have the pleasure of meeting you, assembled together here, which will be at no very distant date, I shall have the gratification of asking you to vote the payment of a substantial dividend on your shares. I shall now be very happy to answer any questions which any shareholder may wish to put to me, and shall then proceed to move and explain the resolutions which we ask you to agree to to-day. (Applause.) On the Chairman resuming his seat no questions were asked, and he expressed the gratification of the directors at the confidence the shareholders had shown.

The CHAIRMAN then moved the following resolutions, which were seconded by Mr. R. NORTHALL-LAURIE, and carried unanimously:—

1. That the capital of the company be increased to £300,000 by the creation of 250,000 shares of £1 each.
2. That each of the present shareholders and warrant-holders shall have the option to be exercised by him or her on or before 12 o'clock on the 26th day of September next, of subscribing for and having allotted to him or her for payment in cash, by such instalments as the directors may determine, such a number of new shares in the company as such shareholders or warrant-holders may think fit, but not exceeding two new shares for each share now held by such shareholder or warrant-holder.
3. That the directors, having reported that a syndicate in Paris, which had been organised by the company's brokers, and in which the directors of this company and the brokers had taken a considerable share and which will be managed by the company's Paris brokers (the senior member of whose firm is proposed as one of the additional directors) had offered to guarantee the subscription at par of £100,000 of the new issue, if it should not be subscribed by the present shareholders or warrant-holders, upon having the option for a period of one year of taking at par a further £20,000 of such increased capital, it is resolved that the directors be and they are hereby empowered to enter into an agreement with the syndicate to carry out such arrangement.
4. That, subject to the following resolutions, Nos. 2 and 3 the new shares

shall be under the control of the directors, who may allot or refuse to allot or otherwise dispose of the same to such persons on such terms and conditions at such times as the directors think fit.

5. That the board of directors of the company be increased to nine, and that the Honourable Forces George Vernon, Agent-General for British Columbia in England; M. Henri Rosenheim, Jules Baron de Machiels, Dr. Jules Goldschmidt, all of Paris; be and they are hereby appointed to act as directors of the company in conjunction with the present directors.

The remaining resolutions were for making various alterations in the Articles of Association.

Mr. NORTHALL-LAURIE: I have to report that the board received with regret the resignation as a director of Mr. Edgar Robson. We proceeded to elect in his place Mr. Horne-Payne, and I must ask you presently to confirm his election. Mr. Horne-Payne has frequently visited the properties of the company, and therefore speaks with experience and knowledge of them. It is owing to the great interest he has taken in the company, and the work he has done, that he has got together this powerful syndicate of foreign and English financiers, which enables us to come to you in the very strong position in which we are to-day. I beg to move the confirmation of the election of Mr. Horne-Payne as a director.

Mr. MCALIFFE seconded the resolution, which was carried unanimously.

The CHAIRMAN: Gentlemen—I thank you very much for confirming my election as a director of this company. I shall certainly devote my best energies to carrying it to a successful issue. I thank you also for your kind attention to-day, and for the confidence which you have shown in the directors by the unanimous way in which you have voted these resolutions.

Mr. MITCHELL INNES moved a vote of thanks to the Chairman, which was seconded by Mr. WILLIAM VERNER, and carried.

The CHAIRMAN briefly acknowledged the compliment, and the proceedings terminated.

AFRICA TRUST, LIMITED.

The first ordinary general (statutory) meeting of the Africa Trust (Limited) was held on Wednesday, at the Cannon-street Hotel, under the presidency of Mr. H. RIDER HAGGARD.

The SECRETARY (Mr. Lancelot C. Walton) having read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—You are aware that this is the statutory meeting of the Africa Trust (Limited), which under the law we are obliged to hold within four months of registration. The meeting being a formal one, you will not expect your directors to enter at great length into the affairs of the company on this occasion, still it may interest you to know that the position of your company is strong. According to an estimate, based upon the current market values of securities held by the company, it has during the three months, more or less, of its existence earned profits amounting to over 30 per cent. on the total issued capital of £50,000, presuming the same to be paid in full, and of these profits a proportion is realised. But about a half only of this capital of £50,000 has as yet been paid up in full, so that the real earnings of the company, estimated on the market values of its holdings, amount to-day to nearer 70 per cent. than 30 per cent. (Applause.) If, however, in view of a possible fluctuation of markets and alteration of the value of securities, we deduct from this profit of 30 per cent. a proportion of one-half, it is obvious that our position still remains satisfactory, and one that gives promise of a good return to us all as shareholders. We can also inform you that the company has other important business in view, notably the securing of a concession, towards which your directors have taken active steps, wherein, should it be obtained, as we have reason to hope will be the case, the value of the interest of this company ought to amount to a very large sum indeed. For obvious reasons, I am sure we shall not be expected to say any more of this matter at present. In conclusion, we may mention that we are negotiating with Paris firms of standing with the object of placing a portion of our reserve capital in the hands of French investors, a course which we believe will prove of great benefit to the company at large. We wish to add that since the formation of our board Sir Melmoth Osborn, K.C.M.G., has joined it as managing director. We think that the company has cause to congratulate itself on securing the services of a distinguished gentleman so eminently fitted by his life-long knowledge of Africa and its affairs, to fill their managing directorship. Further, the Marquis de Beauvoir and Mons. Posso, two gentlemen well known in French financial and other circles, have joined the board as directors in Paris, and by their advice and local knowledge have already given much assistance to your directors. If any shareholders require information upon any matter we shall be very glad to give it, provided that so doing does not interfere with the interests of the company. (Applause.)

Major COTTON: I should like to ask you the number of shareholders that we have in this company.

The CHAIRMAN: The secretary informs me there are 184.

Major COTTON: I would also say—that it is a matter that rests with the board—that I personally always prefer that the shareholders should have the first offer of additional shares when they are issued, because they are usually issued at a price that is remunerative, and I rather object myself to outsiders being brought in when, in my opinion, the original shareholders should have any benefits that accrue from the extra issue of shares. I think their claims ought to be fully considered by the board. I do not wish to insist on this, because no doubt the members of the board are large shareholders, and our interests are their interests; but I only mention the view—and it is a strong view—which I take in relation to this sort.

The CHAIRMAN: I am sure we on the board sympathise with what you say, but the matter has a somewhat different appearance when we consider the placing of capital on the French market. It is obviously very much to the interest of every company to secure the support of French investors, because, as you are well aware, the French investor is rather different from the English investor in a way. As a rule, what he buys he puts away and keeps, and that a considerable proportion of the shares of the company should be held in that manner must be, I am sure, to the advantage of the company at large.

Mr. HENRIQUES said that although the meeting, as had been explained, had only been called for the purpose of complying with the requirements of the Act of Parliament, the Chairman had made a very interesting statement. The thanks of the shareholders were certainly due to the Chairman and his co-directors for what they had done in the very short time during which the company had been in existence, and also, he thought, from what it appeared they were going to do in the future, and he therefore begged to move that such a vote be accorded. (Hear, hear.)

Mr. READ seconded the resolution, which was carried, and the

CHAIRMAN having briefly replied, the proceedings terminated.

AN AMERICAN COPPER MINE ON FIRE.—The town of Homestead, Michigan, was the scene on Saturday of a terrible mine disaster, which, it is feared, will result in the loss of over 30 lives. The Oscoda Copper Mine is one of the deepest in this country, and on Saturday most of the men were working some 2500 feet from the surface. As far as can be ascertained a fire broke out in what is known as the 37th level, with the result that great quantities of carbonic acid gas were generated, and penetrated into every part of the mine. The flames also spread and soon cut off the escape of a party of 30 men who were working in the most remote level. These can only be rescued, if at all, through a drift long since abandoned, and it is almost certain that they have already perished. Two hundred men were working in other levels when the fire started. They made their way to the shaft as best they could, many fainting by the way overcome by the gas. Most of these men were rescued alive, but some are still in the workings.

SEPTEMBER 21, 1825.

THE MINING JOURNAL, RAILWAY AND COMMERCIAL GAZETTE.

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BANNER GOLD MINE, LIMITED.

The first ordinary general (statutory) meeting of the Banner Gold Mine (Limited) was held on Monday, at Winchester House, Captain EUGENE TOLLEMACHE presiding.

The CHAIRMAN said: Gentlemen—This meeting, as you all know, is held to comply with the law, which demands that the shareholders shall be called together within four months of the formation of any company. Very little news, as a rule, is put before the shareholders at such meetings, but I propose to give you a brief description of the property we own, and to tell you what the policy is that your directors propose to pursue. This course will, I think, be appreciated; because, owing to the fact that all the shares were taken up privately, there was no need for the issue of a prospectus. Our mines are situated in one of the greatest gold-producing countries in the world, and everybody knows what enormous wealth has been extracted from California. Writers appear to differ as to whether California or South Africa carried the palm for gold production last year; but I think I am right in saying that no gold mine exists in South Africa which is producing anything approaching the yield of the great Utica Mine, in California, which, I am informed, pays its lucky owners a monthly profit of £170,000. Still, there can be no doubt that California will have to do her utmost if she wishes to keep pace with South Africa. Now, I do not want anybody to infer from what I have said that I consider all gold mines in California are rich, or even good, merely because they are situated in that great gold-producing country. We all know there are failures there as everywhere else, and that great discrimination is needed before anyone embarks his capital in mining shares.

Before I accepted the position I occupy in this company I took pains to thoroughly satisfy myself that the mines it owns, and its prospects, were exceptionally good. The company possesses two mines—the Banner and the Amosky—which adjoin each other, but it is to the former of these that my remarks apply, because until further development work is done upon the latter I can only tell you that the Amosky ledge has been found to be about 14 or 15 feet wide, carrying low-grade ore. It is not the intention of your directors to work upon this ledge at present, but to devote all energy to the Banner, as I shall shortly explain to you. The mine is situated on the south-east side of Table Mountain, about 4 miles from the terminus of the California Northern Railroad, and about five hours run from San Francisco. We have two reports upon it, one of them being from an expert who for ability and integrity ranks, I believe, second to none. I refer to Mr. J. B. Low, of San Francisco, who, I understand, has for many years been adviser in mining matters to Mr. John W. Mackay and other mining magnates of America. I mention this because Mr. Low's report carries very great weight with us, and it is as well that I should explain the reason. The mine has had a remarkable history which Mr. Low, in his report, sums up both concisely and clearly. He says:—"The mine was located and worked by Messrs. McSmith and Sparks about 1857, and is reported to have produced \$600,000 from rock, the greater quantity of which was worked by arrastras. At an immediately below the 200 level, the mine, owing to poor and insufficient timbering, caved badly, and was allowed to lie idle through a misconception of the extent of this cave. After considerable desultory efforts to open up the mine by different parties, a New York company purchased the property, and carried the shaft to the 300 level, at which point further work on the Banner was suspended, owing to the broken country encountered, and to an erroneous opinion as to the value of the Amosky vein to the east. The company, after carrying out some very expensive and useless development work on the Amosky, suspended, and the mine was added to those, the reopening of which by competent men is greatly increasing the gold production of this State." He then goes on to show what has been done since the property passed into the hands of those now interested in it, and says:—"The mine passed into your possession, and the shaft was carried below the disturbed strata to the 500 level, where a crosscut was driven west. After considerable exploration work on this level the true fissure was struck, and a rich ore-body encountered in a short distance north of the crosscut. On the 600 level the fissure is found even more perfect than it is on the 500 level, the walls carrying a heavy graphite 'putty' gouge, the vein matter filling the fissure and the blue laminated ribbon quartz showing up well; in fact, all favourable signs are present, and on this level the fissure has widened out to about 8 feet between walls, an increase of about 4 feet in width as compared with the 300 level. The continuation in depth of such a fissure in this formation admits of no doubt, and the development of the mine shows that pay ore extends throughout the shoot from the surface to the lowest level, on the floor of which the richest rock yet taken out of the mine is found. As I have stated, the 600 level is very near the unbroken formation, and sinking will find a perfect pay-shoot, the upper and broken apex of which produced under your management \$65,000. The thorough opening of the mine should be pushed by sinking the main shaft to the 1000 level, opening the fissure by crosscuts, and by steady exploration on the 500 level. I have known the Banner Mine for many years, having visited it first at the time it was being worked by its original owners; and even at that distant day I was impressed with the probability of the permanence and richness of the mine. The ledge is carried in as promising a fissure as I ever saw, and there is no doubt in my mind that it contains rich ore shoots to the south and north of the one now being worked, and that the north-west feeders encountered on the 500 and 600 levels come to the fissure from a rich and unknown ledge in that direction. In my judgment, from the known dip of the diabase forming the western boundary of the slate, a ledge will be found on the contact of the slate and diabase, and the mine will then take rank among the foremost producers of this State. Is an experience of 46 years I have seldom been upon a more perfectly equipped mine than the Banner; all the works are evidence of the thoroughness, skill, and economy of the management. The electric machinery runs with absolute precision, giving the very best results, and I note that arrangements are made so that steam can be coupled on should the electric power fail. I expected to find a well-equipped, well-opened, and well-managed property, but the conditions at Banner far exceed my expectations, so much so that I cannot advance a single suggestion that would in any way add to the good of the mine. With the admirable system of maps and surveys now in your possession, the future development of the mine will be an easy task. You own a most valuable property, and no time should be lost in opening it up in depth." When such an authority as Mr. Low says that we have struck the true fissure, that the continuance in depth of this fissure admits of no doubt, that the greater the depth the richer the ore, and that immediately we have sunk 300 feet or 400 feet deeper, and reach the point where the slate and the diabase come into contact, the mine will rank among the foremost gold producers in California—when he says all this, and in no equivocal manner, I feel that we are justified in fully believing, as we do, that we have got hold of one of California's bonanzas. For upwards of three years development work has been pushed ahead vigorously at a cost approximating £50,000, and during this development work the ore that has been extracted and milled has yielded, up to the end of last month, nearly \$80,000, the average having been £7 per ton, which everyone will admit is a remarkably good indication of what we shall find when the workings are at a deeper level. What we now propose to do is to follow the recommendation of both Mr. Low and our mine manager, Mr. W. H. Rodda, by sinking as quickly as possible to the 1000 feet level, so as to tap the rich "mother ledge" there; and we propose to provide at least 30 more stamps for handling the ore when we reach that point, as at present we have only 10 stamps running. When this work has been accomplished we have every reason to hope that the dividends will be very large, and for this reason—during the development work I have referred to—the ore encountered yielded \$35 per ton, and as its richness is found to increase in depth, we may fairly calculate on getting \$50 rock at the 1000 feet level, if not before we reach that point, and then, with 40 stamps running, the profits would admit of more than 100 per cent. per annum. I am aware that this sounds very big, but when we bear in mind that various assays taken from

many parts of the mine during development work ranged from \$142 to \$1500 per ton, I do not think we are expecting too much when we estimate on \$50 per ton on reaching the depth I have mentioned. Mr. Rodda's report entirely coincides with Mr. Low's, both of them being agreed that the mine should be carried to greater depth without delay, and large as is the amount of gold that has been taken from the mine—about \$800,000—Mr. Rodda describes the fissure from which it was taken as "merely a mineral vent for the great mother lode existing below." Our object is to attack this mother lode as quickly as possible. Our entire plant is run by electricity, which, as compared with steam, effects a very great saving. In fuel alone we estimate we save over £2000 a year. The mine is, however, provided with steam-power also, which can be coupled on very quickly should it ever be needed. This morning the following cablegram was received from the mine:—"The shaft has reached the depth of 43 feet below 600 feet level. Winze is down 41 feet below 600 feet level. Work going ahead rapidly and well. Winze is in good ore, which continues to improve with depth. Mill has been running half-time on reserve ore. The mill battery plates look very well. Everything going on well." We consider that very good news.

In the absence of questions, the CHAIRMAN concluded the proceedings by expressing the hope that at the next meeting the directors would have a good report to give to the shareholders, and also a good dividend.

MINES SELECTION COMPANY, LIMITED.

The first (statutory) general meeting of the above company was held on Monday, at Winchester House, Mr. WALTER McDERMOTT (the Chairman of the company) presiding.

The SECRETARY (Mr. John S. B. Samborne) having read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—As the notice convening the meeting will have informed you, this is simply the statutory meeting, and your directors have no accounts to present, nor any official report to make. I shall, however, have pleasure in stating briefly and generally what has been done since the incorporation of the company towards carrying out its objects. Of the total capital of £200,000, the authorised issue of £100,000 has been placed by the directors, and has been practically paid up in full. We have on the books of the company some 232 shareholders, and the shares are being dealt in at the present time at a substantial premium. Out of the issue of £100,000, 22,000 shares were allotted to the vendor syndicate for the cash and assets taken over as part of the purchase consideration, and your directors have pleasure in stating that so far as its assets are concerned, they have, by reason of what has been realised and the market value of the unrealised assets, every reason to be perfectly satisfied with the purchase for the company. The company had the advantage of taking over a going concern with a completed organisation, and in getting the advantage of the collected experience of the old syndicate. We made arrangements with Mr. R. J. Frecheville, one of your managing directors now in South Africa, to represent us there. Mr. Frecheville has had a long and very useful experience in connection with African mining, and is well-known in Johannesburg. He has already sent us a number of interesting letters giving us a good deal of valuable information on which we have been able to make some investments. These we hope in time will turn out profitable. In Western Australia we have two experienced mining men looking after our interests, in conjunction with those of other parties working with us. We have lately secured an interest in a large block of mining property in the Haan's district of Western Australia, on which our agent reports very favourably. This property will shortly be floated as a company, and our interest will be represented by shares in the same. In the United States we have had a great number of properties offered us, and have looked into a few, but have not committed ourselves to anything of any large amount up to the present time. Mr. Bayliss, one of your managing directors, spends a portion of each year in the Western States, and this fact, in connection with our relations with other mining men there, enables us to keep in touch with American mines, and to judge of what is offered, while at the same time we can investigate new districts for ourselves without depending on what may come to us. We have established close business relations with the African Metals Company, which is a strong combination, chiefly of German investors, and has a capital of £400,000. The objects of the company are the same as our own; we hope for mutual advantages to be gained by occasional co-operation. The larger enterprises in South Africa at present are not carried out usually by a single firm or company, but by a combination of large operators and investment companies like ourselves. Your board is unanimous in pursuing a policy of safety rather than one of speculation—that is, in paying more attention to investigations of the actual intrinsic merits of properties rather than in watching the market fluctuations of stocks. The field to be overlooked is wide and increasingly complicated in character, but your directors will spare no efforts to make the company a success, and so justify the confidence placed in them. We do not wish at the present time to say anything about actual earnings, or what we have done up to the present, but feel that, under all the circumstances, we have done everything which would be wise for us to undertake. We do not wish to promise profits until we have actually realised them, or to base calculations too much on merely paper profits, and when the time for paying dividends arrives, which we hope will be before long, we shall endeavour to protect the capital of the company against the variations and uncertainties of the mining business in which we are interested. I hope to have something more to say to you at our next meeting.

No questions being asked, the proceedings terminated.

ORION BELT, LIMITED.

The statutory general meeting of the shareholders of the Orion Belt (Limited) was held on Monday, at the Cannon-street Hotel, E.C., under the presidency of Mr. W. H. FRITH.

The SECRETARY having read the notice convening the meeting.

The CHAIRMAN said: Gentlemen—This meeting is held in compliance with the Companies Act, and is, therefore, only a statutory meeting, and really there is no formal business before us, and there are no resolutions to pass; but as this is the first opportunity which the directors have had of meeting the shareholders, it may interest you to receive some information with regard to the company and its operations. The company was registered on May 17 last with a capital of £250,000, divided into 250,000 shares of £1 each, of which 225,000 have been issued—namely, 175,000 as fully paid-up to the vendors—who, you will see, thus take the entire purchase price in shares, and have thus shown their confidence in the future of the property—and £50,000 effective cash working capital, the remaining £25,000 being held in reserve. The company was not advertised, as the whole of the working capital was found privately. The company was formed to acquire and work 406 claims immediately adjoining the property of the Orion, Minerva, and the South Orion Companies, which claims had been carefully selected by Mr. Victor Wolff, who had had many years' experience of the Orion reef as Chairman and managing director of the Meyer and Leeb Gold Mining Company. The property was reported upon by Mr. Wolff by Mr. Lang, manager of the Orion Company, and by Mr. Davy, manager of the Meyer and Leeb; in addition to which, the directors obtained a direct report from Mr. J. C. S. Benyon, Assoc. Mem. Inst. C.E., of Messrs. Benyon and Godfrey, mining surveyors to the East Rand Proprietary Mines, Henry Nourse, United Langlaagte, and others. According to Mr. Benyon, the claims are situated about eight miles from Johannesburg on the Black reef series of reef. The claims are all in one block, and number 406. He reports the distance from the outcrop of the reef of the Orion Company to the Northern boundary of our property to be about 7000 Cape feet, but as the Black Reef only dips between 5° to 7° at the outcrop, he considered it reasonable to suppose—from his experience in the Meyer and Leeb, Orion, and

Minerva Companies, and from bore-holes put down on adjoining properties—that the reef on these claims should be cut at a depth of 300 to 350 feet vertical. He says:—"The average thickness of the Black reef may be estimated to mine about 3 feet, but with sorting the actual reef milled may be taken about 2½ feet," and he adds: "If the reef is found at the depth estimated, the working depth being so small, there is no reason why the mine should not be worked as cheaply as any on the Rand, and with cyanide works a very substantial profit should be made." Although from the information at the disposal of the directors, it was known that a considerable amount of good mineral had been obtained from the workings of the Orion and Meyer and Leeb, the outcrop mines on the reef, they felt that the work absolutely accomplished up to that time was not sufficient to afford firm grounds for relying on the reef running through the property, and, therefore, they looked upon the purchase as being of a somewhat speculative character, and desired to hold the property until such time as the works on the outcrop companies should have been sufficiently extended to afford some additional data for estimating the position and value of the reef on the deep levels. Since the company was formed Mr. Chouan, manager of the Champ d'O, reported by cable as follows:—"Tonnage of ore of all the claims, 5,000,000 unbroken. Expect to strike reef at depth of 152 feet on 30 claims at 464 feet on 374 claims. Consider property one of the biggest and most valuable on Rand." This he has since confirmed in a full report to the company. Only last Monday the directors received information from a private source that on a property almost adjoining, a body of ore, "assaying 2 ounces, and running right into the Orion belt," has been struck, and that the developments in two other properties on the same reef are better than ever expected, and those who seem in the best position to judge, from the knowledge of the reef, state that they have great faith therein, and think that these properties should in time rank as high as any of those on the Main reef series. This information is, of course, not official; it is only private, and requires confirmation. I should not omit to mention that there is a good water right, and that as the main line of railway from Cape Town to Johannesburg passes through the property, the initial expenditure for the transport of the machinery and stores should be minimised, and a great saving of time effected. Advice has been received within the last few days from our solicitors in Johannesburg that the claims have been duly transferred and registered in the names of the company, and your directors have appointed a board in South Africa, consisting of Mr. W. H. Adler, Chairman of the New Croesus Gold Mining Company; Mr. Francis Lowrey, director of the George and May and other companies, and who is well known as agent in South Africa for the South African Gold Trust; and Mr. Victor Wolff, Chairman of the Meyer and Leeb Gold Mining Company, who will act as managing director for this company in South Africa; and I think the shareholders may be congratulated that their interests in South Africa will be represented by these gentlemen. Mr. Wolff and Mr. Lowrey propose to proceed immediately to South Africa with a view to commence operations forthwith upon the property. Before I sit down perhaps I should mention that negotiations are taking place for an amalgamation of this company with two other companies, and that considerable progress has been made therein. It would be premature to say more at the present time than that, if the proposed arrangements be carried out, they will, in the opinion of your board, tend greatly to the reduction of the expenses, and be mutually highly beneficial to the companies interested. (Applause.)

There was no resolution to submit, and no questions being asked, the proceedings terminated.

GOONGARIE GOLD FIELDS, LIMITED.

The statutory general meeting of the Goongarie Gold Fields (Limited) was held on Thursday at the offices, 1, Whittington-avenue, Leadenhall-street, E.C., under the presidency of Mr. CHARLES RONALDSON (the chairman of the company).

The SECRETARY (Mr. D. S. Whitslaw) having read the formal notice of meeting,

The CHAIRMAN said: Gentleman—You are aware that this is our statutory meeting, and on these occasions it is not usual to go very profoundly into matters connected with the company, and for a very good reason—namely, that the statutory meeting being called in compliance with the Act of Parliament which governs these companies, the time that elapses between the formation of the company and the meeting is of such a short duration that the directors in most companies are not in a position to render as full an account of the proceedings and the position of the company as they otherwise would be enabled to do. However, in our position to-day we are able to give you very encouraging advices, and to bring them down to the latest moment. The directors lost no time in proceeding with the objects of this company, and I think that when you have heard my remarks you will be perfectly satisfied with the present position as well as with our prospects. I may congratulate the shareholders generally on having secured such a splendid property as the Boddington Mine, which was only selected by our agents in Western Australia after various fields had been visited and a great number of properties inspected. Considerable development work had been done by the original owners prior to the acquirement of the mine by this company, several shafts having been sunk at different points along the line of reef, all giving splendid prospects. The principal shaft was down 113 feet, exposing the reef from top to bottom without a single break, and widening out from 1 foot 8 inches to 3 feet 6 inches. Development has been continued in this shaft, and it has been found that the reef improves as depth is attained. Mr. Charles Crossland, who is superintending the development of the mine, writing under June 14 last, says:—

While there I found the work done during the last month (as per terms of original agreement) to the drives extending north and south along foot-wall side of reef 30 feet each way, exposing the stone a distance of 60 feet. The drives are alongside of the reef, leaving the stone untouched. In two places I had holes drilled into the reef, each hole 20 feet from shaft. The reef proved 2 feet 10 inches wide in the south drive and 3 feet 3 inches in the north drive. The drillings from both I have carefully panned, with the following results:—From the south drive 3 ounces per ton, from the north drive the drillings were exceedingly rich—1½ lb. of same gave a result of 95 grains, equal to 30 ounces per ton, and my intention is to continue these drives as far as air will permit, and test every 10 feet by borings, from which we will then be able to fairly estimate the returns to be expected.

In the same letter Mr. Crossland says he is fully convinced, from his knowledge of formations, that the property will be a great dividend-paying mine, and reflect credit upon the company. As it was considered advisable to have a report upon the property by an independent engineer, Mr. George Seymour, of Messrs. Bainbridge, Seymour and Co., was instructed, he being in the colony, to visit and report upon the property. This he did, and he fully endorses the high opinion of it already formed. Extracts from his report were published in the prospectus, in which he states that samples of quartz taken from the shaft had yielded 4 ounces 12 dwts. 4 grains, and 4 ounces 15 dwts. per ton. He concludes his report by recommending the property as constituting a permanent investment. You are also aware, from the notice that we lately issued, that the board has the advantage of one of its number being on the spot—namely, Mr. Veitch. He is at the mine at the present moment, and he cabled us a report which, as you are aware, was forwarded by circular to the shareholders a few days ago. That report is as follows:—

Boddington: The mine looks even better than I anticipated. After carefully examining the present workings my conclusions are that the mine will undoubtedly become a very valuable property. A trial crushing from all available points in the mine has yielded 4 ounces of gold per ton of 2240 lbs. There seems every prospect of this being fully maintained. Ore in sight amounts to 2000 tons; commences crushing to-morrow.

The crushing, I may mention, is being done at a neighbouring battery, of which we have the use pending the erection of our own battery. We are assured by the company's agents that the result of two months' crushing would provide sufficient money to pay for the full cost and erection of a 10 head battery. No doubts are entertained as to the supply of water, as in the Hicks Gold Mine, which adjoins your property, a plentiful supply has been obtained at a depth of 70 feet. The photograph handed round marked "A" represents a bird's-eye view from the blow, on the Boddington property, and at the point marked "B" is indicated the condensing plant on the Hicks Mine. You will also notice a great extent of silt lake extending east. Another important matter, of course, is the capital of the company. I am able to inform you that every share in this company is issued, and that the whole capital of £20,000, which your directors informed you they considered necessary for working this mine, is in hand, and will be used for the purposes of this company. The directors meet you to-day with particular pleasure, because the purchasing, the developing, and the opening of a mine are always a matter of some anxiety to a board. Our prospects on the other side are, I am happy to tell you, of a most favourable description. Everything is proceeding in a thoroughly satisfactory manner; we have very able managers, and we are posted very regularly as to the progress of the work. We are expecting daily the crushing return, and as soon as we receive it it will be issued to the shareholders. It is a point of great satisfaction to the directors to know that when we offered this company to the public the capital was willingly and readily subscribed, and we believe that those who have acquired an interest in it will have no reason to regret it. On our part we shall give the utmost attention to the best interests of the company, and we are of opinion that the time is not far distant when the report that we shall be able to place in your hands will be considered of a most satisfactory character, as showing that the undertaking is a remunerative one. I do not think there is anything further for me to remark upon; but if there are any points that occur to you, either myself or some other member of the board will be only too happy to explain them. (Applause.)

Mr. EDWARD WALMSLEY said: You may like, perhaps, to hear a few remarks from me, as managing director of the company which secured, through Mr. Charles Crossland, the Boddington Mine. It was selected by Mr. Crossland, after he had visited most of the chief mining centres and examined very many properties offered to him. Mr. Crossland, although not, I believe, a professional miner, is a very experienced authority on mining matters. He has been associated with several successful exploring expeditions and concerned in the selection of properties which have since made considerable names for themselves. He is a most careful, painstaking, and cautious man, and is widely known and appreciated for his knowledge and conscientiousness. Before he finally determined to take up the Boddington he had many tests made by further sinkings and the opening up of points, whereby a reliable opinion could be formed of the property, which work was done under his personal supervision. He assures us we have in the Boddington a very exceptional property, and I think you will admit that this opinion has been more than borne out by the cabled report we have received from Mr. Veitch, who is one of your directors, which report has just been circulated amongst you. Mr. Veitch states the mine to be a 4 ounce property, and that 9000 tons of stone of this value are in sight. Mr. Crossland's crushing gave 5 ounces to the ton; therefore, Mr. Veitch should be well within the truth. We desired that Mr. Veitch should visit the mine and report upon it to the board, that we might be able to speak to you about it with thorough confidence. We have, of course, the most implicit reliance in Mr. Crossland and Mr. Baker, who is our agent in Perth, but we thought you would like to hear what one of your directors, who is responsible to you, would have to say. A crushing upon a larger scale is now going forward, with a small battery. Mr. Crossland has the loan of, and you may hear within the next few days the result. Until we get our own machinery erected we shall probably crush at a public battery near by. The outcome of these crushings, Mr. Baker informs us, will in a very short time cover the whole cost and erection of our battery. The depth of the present shaft is upwards of 120 feet, and at this depth drives have been made of 60 feet each in opposite directions, and the developments have been done in such a workman-like manner that plenty of stone will be readily available for the mill. Every foot opened has proved the evenness of the reef. The two centres—the Ninety Mile or the Goongarrie field and the Menzies—are, we are informed, practically one, as the same reef, with but slight variation, is found in each. Both centres, you are aware, have earned for themselves a considerable reputation. Mr. Bainbridge (of Bainbridge, Seymour, and Co., the eminent engineers), who knows the Goongarrie district from personal examination, says the field there is the largest and most promising in Western Australia; he cannot speak too highly of the Boddington Reef as a vast and true deposit, and thinks that the mine will carry out its high name to the end. Nor does it appear we shall meet with any trouble on the score of water. Hick's Mine, which adjoins the Boddington, has a plentiful supply at moderate depth, and the rainfall is apparently such that Mr. Crossland points in his report to a large lake near by, and uses the words, in speaking of it, "With this prospect the water difficulty melts away." I do not think there is anything more for me to add, except that we have the full working capital of £20,000 subscribed, of which £10,000 was secured by the public issue and £10,000 since the issue was made. Few companies, therefore, start in better circumstances. (Applause.) We shall keep you informed of the progress made as information comes to hand. As the work of development is being done under Mr. Crossland's guidance and supervision, you will be able to rely upon all information which comes from the mine as thoroughly trustworthy. (Applause.)

Mr. J. J. VICKERS: I think the meeting is to be congratulated to-day on the very satisfactory statement that we have heard, more particularly with regard to the progress that has been made. The gentlemen present are, no doubt, aware that one of the great drawbacks in the present day is the long time we have to wait between anticipation and realization, and I consider that a company that was only issued in the latter end of July, and has now begun crushing, has certainly taken time by the forelock, and has distanced a very great many other companies, who would only be too glad to be in a similar position. Further, I think we are extremely fortunate in the fact that we are so well represented on the other side. I wish we could have had our advisory board out there to-day to join the London board; but that, of course, is an impossibility. Still, I would remind the meeting that you have out there on the advisory board Mr. Alexander Forrest, one of the proprietors of the Wealth of Nations; you have also Sir James Lee-Steele, who is a director of the Commercial Bank there, as well as of Dalgety and Co., and is also Speaker of the Legislative Assembly. You have also heard to-day of Mr. Crossland. Now, I lay great stress upon Mr. Crossland's name from this fact, that he is eminently a practical man on the spot, with a long reputation in connection with enterprises of this kind; therefore, it speaks volumes for this company that you should have on the other side such an influential man identified with the working of it. The way

the company has been received on this side, and the fact of several men in the City of London who are also interested in other Australian concerns coming into this, and investing largely in it, speaks further as to the satisfactory nature of our investment. I congratulate the directors upon the statement that they have been able to make to-day. (Applause.)

The CHAIRMAN: My colleagues and I are very much indebted to Mr. Vickers for the remarks he has made bearing on the present position of the company. The progress that we are able to report is very gratifying to us. It is only right, however, that I should mention that the forward position of the company at the present moment is really owing to the work that was done by the Prospecting and General Developing Company of West Australia, who brought out this company. We in that company had devoted many months of careful attention to this property before we brought it out as the Goongarrie Gold Fields (Limited). Therefore, we must not take all the credit to ourselves for what has been done since this company was launched. I have just come across one of the letters of Messrs. Baker and Co. on the other side. It is dated March 22, which is before this company was floated, and whilst we were still working this property. The letter says:—

Boddington's Mine: Development is rapidly being pushed forward, and they are now down a further 30 feet in the main shaft, and the directors may rest satisfied that the mine will be dividend-paying almost immediately the battery is up.

(Applause.) Of course, in mining some companies are more prosperous than others. It is our good fortune, I believe, to have a mine that we can recommend with every confidence, and which will be satisfactory to every shareholder who is in it.

Mr. VICKERS proposed a hearty vote of thanks to the Chairman and all the directors, including the managing director.

Mr. J. C. RIDGE seconded the resolution, and it was carried unanimously.

The CHAIRMAN thanked the shareholders, and said he hoped that at no distant time they would all be able to congratulate themselves on an improved position. (Applause.)

This terminated the proceedings.

THE DEATH OF MR. F. A. THOMPSON.—We have to regret the sudden and untimely death of Mr. F. A. Thompson, a gentleman well known in the City in connection with some of the leading West Australian companies, and who before his death was director of several, and Chairman of one or two others. His death took place on Friday evening last. The deceased had for some time suffered from insomnia and loss of appetite, but nothing of a grave character was apprehended, and it was hoped that rest would do all that was required for his restoration. He was last at his office on the Friday before his death—September 6—and then went down into Norfolk. On Thursday last his business colleagues rather unexpectedly received telegraphic intelligence that he was returning to town. A number of them met Mr. Thompson at Liverpool-street Station, and were astonished and alarmed to find him much exhausted and in a state of complete nervous prostration. He was at once driven to his residence in Bolton-gardens, and Dr. Hanfield-Jones was summoned. Later on Sir William Broadbent was called in; but it was already realised that the condition of the patient was hopeless. The primary cause of death was a peculiar form of diabetic coma, on which asphyxia supervened. Mr. Thompson died at a quarter to eight on Friday evening, conscious almost to the last. He was only in his thirty-eighth year, although he would have struck most observers as a man at least 10 years older. He leaves a widow and three daughters, who are at present on a yachting cruise in Norway.

BARBERTON REEFS, LIMITED.

London Offices: 15, Copthall Avenue, E.C.
Barberton Offices, Z.A.R.: Barberton Chambers.

CAPITAL £100,000.

In Shares of 10s. each.

DESCRIPTIVE PARTICULARS of the 72 CLAIMS owned by this Company.

PRIDE OF PARIS BLOCKS, SHEBA HILL.

The property is situated on the well-known Sheba Hill, Barberton Gold Fields, South African Republic, and consists of six blocks of ground, each block containing 12 claims; in all the extent is 72 claims, each claim 150 feet by 400 feet. The blocks are located on the second spur of the hills south of the Sheba, and distant as the crow flies about 800 to 1200 yards from the Sheba quarry; and midway between, and in direct line from Sheba Mine, is the recent new strike of Messrs. Lewis and Marks, on Zwartkopje Snyman's Creek, the Pride of Paris blocks being about 400 to 600 yards from the new strike.

The Pride of Paris blocks are sufficiently prospected to prove the existence of a main reef of a payable and permanent nature. The crosscut shoots of quartz on the property is a bluish-black quartzite of a greasy lustre, similar in appearance to the Sheba lodes. The strike in Snyman's Creek, occurring in a direct line south of the Sheba, confirms the theory that rich lodes are to be found in what has always proved on these fields to be the richest parts—viz., crosscut lodes or reefs crosscutting the formation.

The property is well situated for cheap working, mining and milling, and if economically carried out the cost should be about 9s. per ton—in any case not exceed 12s. per ton.

Average samples of the ore have been assayed by Messrs. Johnson, Matthey, and Co., Assayers and Metallists to the Bank of England, Her Majesty's Mint, &c., and gave the following results:

Quartz from No. 1 Drive, 6 oz. 3 dwt. 0 gr. to the ton.

" " " 2 " 1 " 7 " 0 " "

" " " 3 " 13 " 5 " 7 "

It will thus be seen that the average yield from all-round samples of ore is over 2oz. to the ton, and when it is remembered that 10 dwt. would pay well it is not difficult to calculate what enormous profits will be made, as there is an inexhaustible supply of ore on the property giving throughout the above product, and this without taking into consideration what will be given from the river shoots, which run into many ounces to the ton.

In a recent report of Mr. Van Gomber (the Government Mine Inspector for Barberton area), this gentleman states that:—

"He is personally convinced that, taking into consideration the great extent of already proved payable reefs, the discovery of others may be expected."

"The Pride of Paris property possesses many natural advantages; transport now by the Delagoa Bay Railway is within five miles of the mine, and very cheap. The drainage and ventilation of the adits and shafts are simple and effective. There is an excellent site for the battery on the creek side of the property, and can conserve large quantities of water. Some thousands of horse-power are also obtainable, either from the Queen's River, four miles distant, or Kasp River, five or six miles. The ground lies within rifle-shot of, and in a direct line with, the Sheba crosscut lodes—most important and significant fact, when it is taken into consideration that another rich strike has been discovered between the property and the Sheba, also on a crosscut of the formation, and other strikes are being found all around the property.

"Already one very rich lode has been proved in the ground. The prospecting and developing work, although only inaugurated a very short time, has shown excellent results—such results as I feel convinced will appeal to the capitalist to continue the development, and place this property upon the basis of becoming one of the most successful mining ventures and dividend-paying concerns on the Barberton Gold Fields."

The *Financial News*, of September 13, 1895, makes the following remarks respecting the Barberton district:—

"Until comparatively recently it seemed almost as if the Witwatersrand district would continue to absorb capital and enterprise, to the practical exclusion of all the other mining districts in golden South Africa; for, though operations went on in other areas, they were not, for the most part, of a very vigorous kind, nor were the results achieved of such a generally satisfactory character as to afford much encouragement to speculators or investors. But the introduction of the 'iron horse' is steadily altering all that, and activity is increasing wherever the railway systems are being extended, notably in Rhodesia, in Lydenburg, and in the De Kasp district; and there can be no doubt that in the near future the production of the precious metal in these districts will be largely increased. That the De Kasp Goldfield in particular is highly auriferous was an established fact long before the Rand began to monopolise the attention of the 'bosses.'

The *Financial Times*, Monday, September 18, 1895, referring to the Barberton district, says:—

"The advantages which the De Kasp properties now possess in regard to transport arrangements offer a much better incentive to development work in the district.

"The railway will remove the chief of the difficulties under which the De Kasp district generally has laboured, and will lead to a considerable accession of capital and a more thorough development of the properties than has hitherto been the case. Where reefs have been condemned as scarcely sufficiently payable to warrant heavy expenditure, under the new conditions which prevail, we shall doubtless find deeper and more thorough workings, with the result that even properties that have been thought to be worth but little in the past will become dividend-payers in the future."

METEOROLOGY AND MINING.

UNDER the presidency of Mr. D. HANNAH, manager of the Ferndale Collieries, the South Wales Colliery Officials' Association held a largely-attended meeting at the New Inn Hotel, Pontypridd, on Saturday evening, when Mr. JOSEPH THOMSON, M.E., of Exchange Buildings, Cardiff, read an interesting paper on "Meteorology and Mining."

The SPEAKER declared that there existed, of course, a unanimity of feeling that gas explosions in coal mines should, if possible, be prevented. The axiom "Remove the cause and the effect will cease" was as true to day as ever, and whilst he was as conscious as anyone of the seemingly inexplicable mystery which surrounded the problem of how an explosion was caused, yet so far from regarding it as one of the hidden things of Nature or accountable for only by some outside circumstance or a combination of circumstances into which only experts could pry—such as blown-out shots, coal-dusts, and such-like theories—he was strongly of opinion that if fire-damp was prevented from coming into contact with open flame, there would be few or no explosions. He would go further, and say that it was not the gas which we know of which gave rise to difficulty and danger, but that which we did not know of, as was abundantly proved at coroners' inquests. It therefore became their duty to make a special study of the gas "we do not know of," and it was at this point that meteorological knowledge came to their aid and enabled them to grapple with the subtle enemy to the safety of coal miners. Technically speaking, meteorology meant the science of the atmosphere, and he thought that bearing in mind the settled views held by all intelligent and practical mining men that atmospheric pressure, temperature, and moisture, were influences of great potency in connection with the ventilation of coal mines—no greater absurdity could be conceived than that of neglecting to apply to the best purposes the useful information and suggestions which this branch of science placed within their reach. Personally, he could no more be satisfied as a responsible manager of a "fiery" mine without knowing that his responsible officers underground gave the fullest attention and the highest useful oversight to meteorological conditions than he would be content at sea in a storm, doubtful as to whether the ship was rotten or sound or whether the mariners were reliable or worthless. The speaker then gave an interesting description of a meteorograph, which he submitted, and which, he said, was the only apparatus of its kind in existence. The meteorograph was a delineator of the atmosphere, and which, in its scope for coal mining purposes embraced the elements of pressure, temperature, moisture, and time of observation, together with diagnosis of indications as compared with what they were 24 hours previously. With such an apparatus there should be little or no difficulty for colliery officials keeping themselves in constant touch with the operations of those physical laws and forces which admittedly exercised so powerful an influence for good or evil upon the exhalations and accumulations of fire-damp in coal mines. The adoption of the meteorograph would, he claimed, lead to sound and practical scientific progress, and his proposals contained nothing to which even the most fastidious could take exception.

The paper was listened to with much interest, and the discussion upon it was adjourned to the next meeting.

References were made to the recent calamities at Aberdare Junction and Tynnybedw Collieries, and on the motion of the CHAIRMAN, seconded by Mr. GRIFFITH THOMAS (Mardy), votes of condolence with the relatives of the victims were passed.

AUSTRALASIAN MINES' OUTPUT FOR AUGUST.

	GOLD.	Mar.	April	May	June	July	Aug.
	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.	ozs.
Aladdin	2,400	1,768	1,250	5,100	2,560	1,285	
Amana Wentworth.....	—	48	20	—	—	—	
Austin	—	—	190	—	—	—	
Baker's Creek	1,995	1,235	1,245	1,115	943	1,140	
Bayley's No. 1 South.....	200	423	479	259	158	182	
Bayley's Reward	917	665	585	885	630	200	
Bonnie Dundee	—	—	75	—	—	—	
Brilliant	2,074	2,280	2,356	—	2,940	2,590	
Brilliant Block	2,215	2,370	2,511	3,271	2,074	2,312	
Brilliant St. George	2,174	2,905	1,906	2,572	2,848	2,734	
Cassidy Hill.....	—	—	—	—	70	—	
Consolidated Gold Mines of W.A.	77	—	—	—	—	—	
Consolidated Murchison	440	—	311	—	750	418	
Coolgardie Mint	—	—	—	689	—	—	
Cue Victory	—	—	—	455	375	480	
Cue Victory.....	—	—	—	—	—	480	485
Cumberland	325	600	494	421	592	426	
Day Dawn Block	1,291	1,240	1,485	719	1,271	1,651	
Day Dawn P.C.	459	437	490	423	313	353	
Emerald Reward	—	433	276	90	106	—	
Gem of Cue	—	—	—	—	28	—	
Golconda	—	—	—	—	528	360	
Great Boulder	—	1,620	1,276	2,299	2,933	2,906	
Hauraki	—	—	—	—	3,269	2,911	
Kapanga	—	—	—	—	490	285	
Lake View	1,349	598	878	583	—	1,284	
Mills Day Dawn	5,375	2,476	2,365	3,724	2,722	3,074	
Mosman	760	627	8				

THE LIST WILL CLOSE ON MONDAY.

The EXPLORERS' SYNDICATE (LIMITED) and the EXPLORERS' FINANCE COMPANY (LIMITED) invite Subscriptions for the undermentioned Issue.

GRAY'S GOLDEN CROWN, LIMITED.

WHITE FEATHER, WESTERN AUSTRALIA.

INCORPORATED UNDER THE COMPANIES ACTS, 1862 TO 1890.

CAPITAL ... (In Shares of £1 each) ... £100,000.

ISSUE OF 60,000 SHARES. Payable: -2s. 6d. on Application, 7s. 6d. on Allotment, and the balance by Calls of not more than 5s. at intervals of not less than One Month.

DIRECTORS.

HENRY W. LOWE, Esq. (Chairman Hit or Miss Proprietary Gold Mines, Limited), 7, East India Avenue, E.C.
 H. J. DEACON, Esq. (Chairman North White Feather Consolidated Gold Mines, Limited), The Limes, Preston Park, Brighton.
 F. C. POISSON, Esq. (Messrs. F. C. Poisson and Co.), Bartholomew House, E.C., and Johannesburg.
 WILLIAM LONSDALE, Esq. (Director Golden Crown, Limited), Hutton Roof, Eastbourne.
 T. HARRISON DAVIS, Esq. (Director West Australian Trust, Limited), 54, Old Broad Street, E.C.
 LIEUTENANT-COLONEL W. T. ELLIS, Rhodes Hill House, Guildford.

LOCAL DIRECTOR.—A. F. Gray, Esq., White Feather, Western Australia.

BANKERS.—The London Joint Stock Bank, Limited, Lothbury Office, 6, Lothbury, London, E.C.; the Union Bank of Australia, Limited, Perth and Coolgardie, Western Australia.

SOLICITORS.—For the Vendors: Messrs. Vallance, Birkbeck, and Barnard, Lombard House, E.C. For the Company: Messrs. Burn and Berridge, No. 11, Old Broad Street, E.C.

AUDITORS.—Messrs. Monkhouse, Goddard and Co., Nos. 28 and 29, St. Swithin's-lane, E.C.

SECRETARY AND OFFICES.—W. G. Browne, Esq., No. 59, Old Broad Street.

COOLGARDIE AGENTS.—Messrs. Colin J. McCulloch and Co., Bayley-street, Coolgardie, and 21, Gresham House, E.C.

Gray's Golden Crown, Limited, has been formed for the purpose of acquiring Mining Lease or Claim 165 (12 acres), at White Feather, Western Australia, the property of Mr. A. F. Gray, of White Feather.

The property to be acquired is bounded on the north (on the line of reefs), and on the east by the property of the Golden Crown, Limited (see Plan). The undermentioned reports show that besides other reefs, the Golden Crown and Cambria Reefs run right through the property.

Reports upon the property to be acquired by this Company have been made (See full Prospects):—

By Professor Nicholas, F.G.S.

By Messrs. Colin J. McCulloch and Co., of Bayley-street, Coolgardie, and 21, Gresham House, E.C.

By Mr. J. C. Jesson, late Manager of Burbank's Birthday Gift Mines.

As before mentioned, the property to be acquired by this Company adjoins the property of Golden Crown (Limited). Prior to the issue in March last of the prospectus of the Golden Crown (Limited) reports upon that Company's property were made by Mr. John Melkilejohn and Mr. Charles Kaufman, M.E. Mr. Melkilejohn referred to the property of Golden Crown (Limited) as "the show mine of the White Feather District." The following are extracts from Mr. Kaufman's report on the Golden Crown Reef, the property of Golden Crown (Limited), made when the main shaft was only 6 ft. deep:—"The country rock is conglomerate diorite, a true and well-defined

ABRIDGED PROSPECTUS.

face vein running north and south. The vein dips east at an angle of 45°. Average width of vein 2 ft. 6 in. The vein has been proven for a length of 550 ft. I estimate the ore in sight at 1000 tons, 30z. 10dwt. to the ton. I estimate the value of the ore at £56,000 in sight." A cable from Mr. Kaufman published in the Press on August 28 reports the shaft on the property of Golden Crown (Limited) to be now 150 ft. deep, and says that the estimated amount of ore in sight above the present workings is greatly in excess of £100,000, and that the Mine continues to improve with every foot of workings. A further cable from him as to the same property published in the Press on September 2 says:—"The mine looks splendid. Depth of shaft 200 ft. The width of the vein is 3 ft. 9 in. The bottom of the shaft has developed a large body of high-grade ore, certain to average 50z. per ton." And another cable from him published on September 14 states:—"Have struck water in the shaft at a depth of 202 ft." The market value of the £1 Shares of Golden Crown (Limited) is now about £2 10s.

Applications for Shares may be made by letter sent to the Offices of the Company, together with a remittance for the amount payable on application.

Prospectuses and Forms of Application may be obtained from the Brokers, Solicitors, Auditors, and at the Offices of the Company.

Applicants for Shares should cut out the following Form and forward same to Bankers, with cheque for amount payable on application.

FORM OF APPLICATION FOR SHARES.

GRAY'S GOLDEN CROWN (LIMITED).

To the Directors of Gray's Golden Crown (Limited).

GENTLEMEN.—

Having paid to your Bankers the sum of £....., being 2s. 6d. per Share payable on application for Shares of £1 each, I request you to allot me that number of Shares, and I agree to accept the same, or any smaller number that may be allotted to me, upon the terms and conditions of the Prospectus dated 13th September, 1895, and the Memorandum and Articles of Association of the Company, and I request you to place my name on the Register of Members in respect to the Shares so allotted to me, and engage to pay the further instalments upon such allotted Shares as the same shall become due, and I agree with the Company, as Trustees for the Directors and other persons liable, to waive any fuller compliance with Section 37 of the Companies Act, 1857, than is contained in the said Prospectus.

Name (in full)

Address

Description

Ordinary Signature

Date 1895.

SILVER KING.—Cable from mines:—"First half September. Ore crushed 1100 tons. Estimated production 9000 ounces silver."

VAN RYN.—The following cablegram has been received from Johannesburg:—"Profit for the month of August: From the mill, £742; cyanide works, £1145; total, £1887."

WENTWORTH GOLD FIELDS PROPRIETARY.—The following cablegram has been received from the mines:—"Five weeks' return totals 1450 ounces of gold (approximate value £5250)—namely, 1000 tons of ore have been crushed, yielding 1072 ounces; and 3 tons rich crude ore have been shipped, 1072 ounces."

ZEEHAN - MONTANA.—The following cable has been received from Hobart, dated September 13:—"Have shipped 110 tons of first class ore per s.s. Sachsen, containing about 77 tons of lead and 11,000 ounces of silver. Stock at mines 200 tons, containing about 140 tons of lead and 20,000 ounces of silver."

CORRESPONDENCE.

* * We wish it to be understood that we do not hold ourselves responsible for, and do not necessarily endorse, the opinions of correspondents. All communications must be accompanied by the names and addresses of the senders, though these need not necessarily be published.

THE BLUE SPUR AND GABRIEL'S GULLY CONSOLIDATED GOLD COMPANY, LIMITED.

TO THE EDITOR OF "THE MINING JOURNAL."

SIR,—The last return of gold as cabled by the manager on September 6, viz.: 707 ounces for the period from June 11 to September 6 shows a falling-off as compared with the previous return of 1247 ounces for the period from February 28 to June 10. This falling-off is explained in a letter received from Mr. Howard Jackson, from which the following are extracts:

"The weather since the dispatch of my last letters has continued to be very severe; there have been no very hard frosts, (14° was the hardest), but there has been no thaw, and heavy constant falls of snow which have completely sealed the head races. Mr. McHattie has by constant attention to the lower level ditches been able to do a little sluicing on No. 1 side, yesterday he changed the water to No. 2, the sluice boxes being sufficiently clear of ice to permit sluicing therefrom the loose dirt discharged by the last blast, while he put in a new liner in No. 1 elevator and washed up some of the boxes on that side, but the water was all out by 9 p.m., the dams empty, and only about 200 inches coming from all sources. The snow had melted considerably about the mine but on the hills immediately behind it was as deep as ever, and during last night another heavy fall took place. To-day, he is with three men only, using the Perseverance water to sluice out the drain repairs paddock, as there is not sufficient head for ordinary sluicing in the cement. The pay-sheets for the current four weeks will be a very dismal affair for the men, many of whom have only three days' work for the past three weeks, and only broken time for some weeks before that. No such inclement season has been experienced since the winter of 1861-62."—Yours faithfully,

London, September 19.

J. FOSTER, Secretary.

We have just learnt from Mr. P. Davies, the general manager of the Mitchell's Creek Freehold Gold Estate, New South Wales, who is still in London, that Fraser and Chalmers, of Erith, have just completed four Frue vanners for his Ophir Mine, near Orange, New South Wales. The above well-known firm have made a very excellent job with the vanners, adding all the latest improvements.

These well-known and valuable concentrating machines are now being packed for shipment, and they are expected to arrive in Sydney about the same time as Mr. Davies, who is returning homewards per ss. Ophir, which sails on October 4. Mr. Davies looks very much better for his holiday, and is perfectly charmed with Old England. He intends paying special attention to the Ophir property on his return, and he fully expects that it will develop in a very short time to one of the largest and most prosperous gold mines in Australia. The Ophir lode is from 40 to 80 feet in thickness, and may be termed so far, low grade sulphide ore, that will yield from 8 to 10 dwts. per ton, which is considered highly payable when found in such quantities in kind slate formation with the additional advantage of having any quantity of water running through the centre of the property. Mr. Davies is a great believer in having first-class concentrating plant erected on mines, such as the Ophir, for as he states, a good percentage of sulphide gold cannot be saved unless special attention be paid to close concentration. It may be interesting to the mining community to know that Mr. Davies was the first person to introduce the Frue vanner to Australia, and bought one from Adams and Carter, the then agents at San Francisco thirteen years last June. He took it to Sydney with him and had it erected at Barmedman. We shall look forward with some interest to the development of the Ophir Mine, for it is situated on the very spot where Hargraves and Lester discovered the first payable gold in Australia in 1851.

CHAMP D'OR FRENCH.—The following cable has been received from the manager of the mine at Johannesburg:—"During the month of August the mill worked 29 days, crushed 5500 tons, producing 3366 ounces of gold; cyanide 4400 tons, yielding 1150 ounces of gold; total, 4516 ounces of gold."

CASSEL COAL.—A cablegram dated 16th inst. gives the output for the month of August as 20,635 tons; profit, £3550. Mine shut down for five days during the month in consequence of the failure of the Netherland Railway Company to provide sufficient trucks. Cable information reports better supply this month.

BRILLIANT BLOCK.—The directors have received the following cablegram from the head office in Charters Towers:—"Have crushed during the month 2506 tons of quartz for 2220 ounces of gold. The profit on the run is £3350. Have declared the usual monthly dividend of 6d. per share, payable October 7 proximo." The approximate value of this return is £7650. The London register will be balanced for the above dividend on Saturday the 28th instant.

BROKEN HILL PROPRIETARY.—The directors have received the following cable from Melbourne:—"Dividend of 1s. per share declared, payable on October 16, the books for which will be made up on the 2nd of that month. A bonus of 1s. per share has also been declared, and is payable in conjunction with the above dividend. In consequence of the fire not having suspended operations to the extent anticipated are in a position to pay bonus this occasion."

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CLYDE GOLD MINES.—The following cable has been received from the company's manager, Mr. Henry Wright, at Coolgardie, regarding the 8 feet reef:—"Estimate crushing return on 100 tons will be 3 ounces per ton. Sufficient water for 10 stamp mill."

CROWN REEF.—Results for August, received by cablegram from Johannesburg:—"Number of days working 120 stamp mill, 29 days 14 hours; crushed by 120 stamp mill, 18,283 tons; yield in smelted gold from 120 stamp mill, 7398 ounces; yield in smelted gold from cyanide works, 4133 ounces, equal 11,531 ounces. Revenue per ton crushed, £2 2s. 5 1/2d.; cost per ton crushed, £1 6s. 3 1/2d.; profit per ton crushed, 16s. 2 1/2d."

DARIEN GOLD.—The directors of the Darien Gold Mining Company (Limited) have received a cablegram from their manager at the mines stating that the crushings for August were 400 tons, producing 255 ounces of gold.

DON PEDRO.—Telegram received from the mine, dated 5th inst., states:—"Produce for month of August, 155 ounces."

ELKHORN.—"Bullion produced in the mill for the week ending September 14, 9200 ounces."

EAGLEHAWK CONSOLIDATED.—The directors have received the following cablegram from the mine dated Maldon, September 18:—"Union Company adjoining, gold has been discovered 800 feet, 8 ounces of gold per ton."

EASTLEIGH.—August return:—"60 stamps crushing 28 days 10 hours produce 744 ounces. Cyanide 1422 ounces, total result 2166 ounces."

EL CALLAO.—Messrs. Baring Brothers and Co. (Limited), have received the following telegram from El Callao Mining Company:—"728-750 ounces of gold produced by the Colombia Mine for last fortnight, and 1426-1450 ounces by the Panama Mine."

FREDERICK THE GREAT.—The directors have received a cable from the local board, informing them that the quartz in the 680 feet level shows several nice specks of visible free gold.

FRONTINO AND BOLIVIA.—Statement for the month of July is as follows, viz.:—"Estimated value of gold and sulphurates, £6700 3s. 4d. Cost at the mines, Medellin and in London, £6789 15s. 8d. Estimated profit, £880 7s. 8d."

GELDENHUIS ESTATE.—Copy of cable received from head office, Johannesburg:—"Last month's (August) profit was £10,800."

HEIDELBERG GOLD.—The directors have received a cable to the following effect from the manager at the mines:—"Work is being pushed ahead. The shafts which have reached a depth of 100 feet continue to give good results in both pannings and assays. The new workings and developments will proceed as requested."

ISLE OF MAN.—The secretary has sold 100 tons of this company's ore at £8 18s. 6d. per ton.

THE MAORI GOLD MINE, LIMITED,

MENZIES DISTRICT, WEST AUSTRALIA.

CAPITAL - - - - - £70,000,
IN £1 SHARES.

55,000 Fully Paid-up Shares are Reserved for Allotment to the Vendors.

6,007 SHARES HAVE ALREADY BEEN PRIVATELY SUBSCRIBED FOR AND ALLOTTED.
8,993 ARE NOW OFFERED FOR SUBSCRIPTION.

The SUBSCRIPTION LIST WILL OPEN on THURSDAY, SEPTEMBER 26,
1895, and CLOSE on FRIDAY, SEPTEMBER 27, 1895.

PROSPECTUSES CAN BE OBTAINED

From the Bankers, THE LONDON JOINT-STOCK BANK (Limited), Lothbury.
Office, 6, Lothbury, E.C.;

From the Brokers, F. A. HELPS and SON, 9, Cornhill, E.C.;
And at the OFFICES OF THE COMPANY, 8, Staple Inn, Holborn.

REPORTS FROM THE MINES

BRITISH MINES.

DEVON GREAT CONSOLS.—Wm. Clemo, September 19: Watson's engine shaft. In the 172 fathom level east the lode is 4 feet wide, composed of capel, quartz, and a little mundic ores. In the 148 fathom level east the lode is also 4 feet wide, producing 1 ton of copper and mundic ores per fathom. All the stopes are looking fairly well throughout the mines, and are in full operation.

LEADHILLS.—W. H. Paul, September 16: Brown's vein. The various points of operation on this vein are without any material change since last week, the stopes producing about their usual quantities of ore.—Raik and Highwork veins. The ground in the crosscut east at the 100 fathom level continues much the same, showing a little spar on the joints. The 100 fathom level driving north of crosscut on Raik vein is now producing 35 cwt. of ore per fathom. In the same level going south of crosscut the vein is strongly mixed with spar, but contains only spots of ore at present.—Sarroweal vein. In rise over Gripp's adit south of George's Rous vein there is a strong sparry vein showing spots of lead ore occasionally.

SOUTH CONDURROW.—September 18: The men in the rise in the back of the 40 east are set to stop the lode westward, which is worth £7 per fathom. The stope coming towards the rise is worth £10 per fathom. Two other stopes in the back of the 40 are worth £8 per fathom each. The rise in the back of the 50 east is without value, but we hope it will soon improve. The stope in the back of the 60 east is worth £9 per fathom.—(Signed) William Rich.

WHEAL GRENVILLE.—The following is a short report of this mine:—Gould's engine shaft. The shaftmen are employed cutting the top plat at the 248 fathom level, and as soon as this is completed we shall commence to sink. The 248 fathom level east of Gould's is being driven by a boring machine. The lode is producing low quality tinstuff, but promises for an early improvement. The 232 fathom level east of Gould's is worth £15 per fathom. The 220 fathom level east of Gould's is worth £13 per fathom.—Fortescue's engine shaft. We are pleased to say the lode is again making south of the wall, and is worth £30 per fathom. We shall complete the plunger-lift at the 246 fathom level, and set it to work, all well, by the end of this week. The 246 fathom level west is through the crosscourse, and the lode is again well defined, and worth £12 per fathom. The 246 fathom level east is without change to note; still a good lode in it. There is no particular change in any of the stopes to note.—(Signed) Chas. F. Bishop.

COLONIAL, INDIAN, AND FOREIGN MINES.

BROKEN HILL PROPRIETARY.—The manager reports that for the week ending the 19th inst. 6075 tons of ore were treated yielding 578 tons of lead, containing 129,479 ounces silver, also 1752 tons treated by amalgamating and leaching plants producing 21,040 ounces silver. The price of the shares in Melbourne is £2 1s. buyers.

PESTARENA.—Mid-monthly report. Ends.—In the 46 east on No. 1 lode there is a branch of quartz mixed with patches of pyrites 40 centimetres in width, which is estimated to produce 1 ton of 1 ounce ore per fathom. The 55 east on No. 1 lode carries a branch in centre of end, averaging 10 centimetres in width, but it is still sterile. The 90 west on No. 1 lode has slightly improved, the branch on the foot wall being 15 centimetres in width. Its estimated value is 1½ tons of 1 ounce ore per fathom.—Crosscuts. The 70 north and 90 south (Acquavita) are both in hard schist mixed with quartz.—Stopes. These continue about the same as reported on the 3rd inst.—Stabioli Mine. The crosscut west from Morghen Adit has passed through the branch last reported, and is again in hard compact schist.—Kint Concession. In the Guja adit south no change has occurred since the commencement of the present month. In the Guja end west on branch there is still a vein of pyrites in centre of end, progress being slow owing to its extreme hardness. The lode in the end west on Kint lode continues 90 centimetres in width, carrying 30 centimetres of low grade ore. In the winze under Quarazza adit preparations are being made for fixing a small pump, after which it is hoped better progress will be made.—Pozzone Mine. This has been reforked to a depth of 45 metres.—(Signed) W. Henwood Trelease, T. H. Messa, September 15.

SHIBA.—The following report has been received from the general manager for the month of July:—Mine. No. 5 level. The west drive was extended 35 feet.—No. 6 level. A crosscut north has been commenced between Nos. 17 and 21 winzes.—No. 7 level. The east end of the level was extended 34 feet. No. 1 north crosscut advanced 21 feet 6-inches. No. 4 north crosscut advanced 24 feet. No. 5 north crosscut advanced 13 feet.—No. 8 level. On this level we are preparing to sink to the back stope on No. 9 level west of the east incline shaft.—No. 9 level. The west drive has been extended 17 feet. The east drive has been extended 6 feet.—No. 10

level. From the east incline shaft the east drive has been extended 15 feet. The west drive has been continued on three faces and extended from the east incline 15 feet, eastward from the west incline 14 feet 3 inches, and westward from the same shaft 318 feet 6 feet.—Incline shafts. The main incline shaft was sunk 34 feet, and the east incline 26 feet.—Low level tunnel. This was extended on the hanging-wall 83 feet 6 inches.—Oriental block. The Good Hope shaft was sunk 40 feet, No. 5 level was extended east 8 feet.—Nil Desperandum block. The No. 2 north crosscut on No. 111 level was extended north 26 feet.—Nil Desperandum north. The drive on this block has been extended 25 feet 6 inches.—Annie's Fortune block: Quarry. The north crosscut on the footwall was extended 32 feet, and the central drive (west) advanced 58 feet.—Annie's Fortune west, No. 1 block. A drive from the bottom shaft has been put in 4 feet 6 inches. No. 2 shaft has been sunk 11 feet.—Stopes. The stopes from No. 5 to No. 6 levels, round the east incline shaft, and also on the No. 8 level, have produced fair milling ore; and that broken on No. 9 level back stope was very rich at times during the latter part of the month. Some rich rock was broken while sinking the east incline shaft, towards No. 11 level, as also in driving on No. 10 level. The No. 9 level stope improves as it is opened up; and the indication is that we shall have a fine body of ore between Nos. 8 and 10 levels, and the east and west inclines.—General. A cistern has been cut on No. 10 level, and preparations are now being made to place the electrical pump on that level. On No. 5 level a masonry wall has been built, 3 feet high, round the underhand stope near No. 1 winze, with a view of preventing the lower levels being flooded, as was the case last rainy season.

FOR CONTINUATION OF MINE REPORTS SEE PAGE 1146.

THE MOST PRECIOUS METALS.—We commonly think of gold as the most valuable of metals, because it is the most precious of the metals that are produced in sufficient quantity to be in common use. There are, however, several rare metals that are much more valuable than gold. Gallium, for example, is quoted at \$3000 an ounce avoidupois. Traces of it occur in some zinc ores, tons of which must be worked over in order to obtain a trifling amount. Gallium is a very remarkable substance. At an ordinary summer temperature of 86° F., it becomes like liquid mercury. The latter becomes solid at 39° below zero. Most costly of all metals, save only gallium, is germanium, which is quoted at \$1125 per ounce. Rhodium is worth \$112.50 per ounce; ruthenium, \$90 an ounce; osmium, \$26 an ounce, and palladium, \$24 an ounce. The last is about equal in value to gold. These metals are of no great commercial importance. Most of them are mere curiosities of the laboratory, having been discovered originally by accident, incidental to the analysis of ores. It has been suggested that some of them might be coined, but the supply of them is too uncertain. That was the difficulty with platinum, which the Russian Government minted in the first half of the present century. Iridium is utilized to some extent for making instruments of delicacy which must have the property of not corroding. It is obtained from "iridomim," a natural alloy of iridium, osmium, rhodium, platinum, and ruthenium. This extraordinary mixture of rare metals is white. *Mining and Scientific Press.*

A NEW REEF.—The auriferous line between Coolgardie and Dundas is gradually being established. Messrs. Cummins, Thorne, and Oldfield, have found a new run of reef about 35 miles S.E. of Coolgardie, and about 15 miles due south of the Horse Rocks. Messrs. Thorne and Oldfield went out to the Lake Cowan rush, and on returning took a short strike through densely scrubby country, and whilst struggling slowly through came upon the outcrop of a reef which showed gold freely. Two leases, 18 and 12 acres were pegged, and the finders came into town and went out again in company with Mr. Cummins. When they got back they found that the news of the discovery had leaked out, and there were some 30 or 40 men on the ground. The lode outcrops for about 2½ chains through the prospectors' lease, and bears a course N.N.W. and S.S.E. The formation is 16 feet wide on the surface, and wherever opened so far carries good gold. The party have brought in a quantity of stone, all showing nice dots of the yellow metal. One block must be 4 cwt., and, although obscured by the brown loam clinging to it, the gold can be seen here and there in coarse specks. There is no water nearer than 10 miles south of the find, and anyone going from here would have to take a good supply from the Horse Rocks. The prospectors' leases have been named the Hilda Victoria and the Kismet. Already the line is pegged 1½ miles south and about a mile north.—*Western Australia Gold Fields Courier.*

WEMMER.—The following advice is to hand by cable:—“The profit for the month of August is £14,917.”

WALDON'S FIND (White Feather).—The mine manager cables:—“Developing wonderfully rich. Newspaper reports to follow.”

SOUTH AFRICAN MINES' OUTPUT FOR AUGUST.

THE following are the August returns, so far received, and the results for the previous five months:—

	GOLD.					
	Mar.	Apr.	May.	June.	July.	Aug.
Afrikander	473	303	303	—	*	—
Barrett	519	433	555	515	425	283
Block B	3,223	3,340	3,126	3,020	3,240	3,581
Buffelsdoorn	4,554	4,326	4,384	4,100	—	—
Champ d'Or	4,198	3,796	3,240	3,625	3,946	—
Champ d'Or Deep	1,805	*	*	—	*	—
Champ d'Or (French)	4,200	3,800	*	3,625	3,920	4,516
City and Suburban	11,124	8,648	9,491	9,471	10,096	—
Crown Reef	9,945	10,186	10,321	11,269	11,849	11,551
Durban-Boedeport	5,517	5,830	5,838	5,854	5,899	6,006
Hastleigh	2,263	2,354	2,350	1,882	1,912	2,166
Ferreira	6,938	6,759	6,977	6,797	7,081	6,931
Forbes Reef	118	101	130	121	141	—
Geldenhuus Estate	4,777	6,660	7,487	7,614	7,775	7,788
Geldenhuus Main Reef	2,007	1,998	2,090	2,127	2,373	2,163
George and May	731	630	910	900	770	—
George Goch	5,306	3,169	3,220	3,265	3,053	3,099
Ginsberg	940	887	919	957	930	—
Glencairn	5,096	5,317	5,140	4,911	4,918	5,203
G. F. of Marhona and ...	303	230	311	242	348	—
Henry Nourse	2,217	2,170	2,299	3,093	4,561	4,210
Joe's Reefs	—	247	455	299	327	331
Johannesburg Pioneer	1,058	1,080	1,155	1,305	1,310	—
Jubilee	2,217	2,557	2,624	2,657	2,613	2,707
Jumpers	4,429	4,801	6,139	6,588	6,108	7,079
Langlaagte Estate	13,193	13,203	13,006	13,007	12,021	11,472
Langlaagte Royal	2,626	2,195	2,424	2,063	3,401	—
Lisbon-Berlyn	947	960	791	691	590	832
May Consolidated	4,226	4,279	5,647	6,060	6,025	6,030
Metropolitan	2,209	2,359	2,315	2,227	2,411	—
Meyer and Charlton	2,986	3,019	3,115	3,123	3,398	3,745
Meyer and Leeb	260	407	268	130	*	—
New Chimes	2,724	2,856	2,366	2,082	2,199	—
New Clever Estate	1,463	1,902	1,749	1,236	1,389	1,479
New Crosses	—	—	—	2,059	2,932	3,084
New Heriot	6,091	5,725	5,773	5,622	5,638	—
New Kleinfontein	2,608	2,709	2,775	2,630	2,826	2,829
New Midas	—	—	309	373	645	—
New Primrose	11,413	12,058	11,563	12,018	12,150	12,206
New Rietfontein	2,532	2,448	2,648	2,292	2,233	2,328
Nigel	4,221	4,063	4,204	4,235	3,633	3,724
Orion	2,838	3,070	3,550	3,650	3,750	3,700
Paarl Central	2,350	2,714	2,944	3,053	3,127	3,138
Porge-Randfontein	—	3,516	4,027	3,939	3,918	4,114
Princess Estate	1,810	1,883	2,021	1,950	2,100	—
Randfontein	4,851	*	—	—	—	—
Robinson	14,142	14,097	14,043	14,601	14,824	15,935
Roodepoort United M.R.	4,175	4,472	4,599	4,763	4,787	4,250
Salisbury	1,631	2,128	2,126	2,600	2,377	—
Sheba	1,683	1,185	1,792	1,499	2,618	4,807
Simmer and Jack	7,590	8,603	8,888	8,617	7,085	5,543
Spitskop	—	—	—	271	269	—
Stanhope	1,074	995	1,131	1,150	1,050	—
Sutherland Reef	687	426	518	504	749	—
Transvaal Gold	2,723	3,350	2,878	2,450	3,100	3,075
United Ivy Reef	—	—	145	216	—	—
United Langlaagte	—	—</td				

NEW ISSUES.

GRAY'S GOLDEN CROWN (LIMITED).

This company, with a capital of £100,000, in shares of £1 each, has been formed for the purpose of acquiring a mining lease or claim No. 166 (12 acres) at White Feather, West Australia, the property of Mr. A. F. Gray, of White Feather. The property to be acquired, according to the prospectus, is bounded on the north (on the line of reefs), and on the east by the property of the Golden Crown (Limited), and the experts' reports show that, besides other reefs, the Golden Crown and Cambria reefs run right through the property. Reports upon the property to be acquired by this company have been made by Professor Nicholas, F.G.S., Messrs. Colin J. McCulloch and Co., of Bayly-street, Coolgardie, and 21, Gresham House, E.C., and by Mr. J. C. Jackson, manager of Burbank's Birthday Gift Mines. Professor Nicholas, in his report to Mr. Gray, dated November 29 last, states:—"At the present time the chief value of this property rests on the fact that the Golden Crown and the Cambria reefs strike for respectively 260 and 220 yards right through the Golden Crown South Mine (*i.e.*, the property to be acquired by this company) and that they have each been discovered and found to be auriferous within this mine. The title work already done on them suffices to encourage the belief that here lies valuable property, simply requiring capital to develop, especially the continuation of the well-known rich Golden Crown Reef. I should also mention as further exhibiting the value of this mine are, that the whole of the ground surrounding it is occupied by other mineowners. After a careful inspection of this mining property, my impression is that it will prove to be a rich gold mine, at comparatively shallow depths." Nine months after the above report was made, Messrs. McCulloch and Co., under date August 30, 1895, reported that the "well-known Golden Crown and Cambria reefs go right through the property, both reefs showing strong and well-defined, averaging over 2 feet in width, and the ore containing free visible gold. We have always had a high opinion of the property, and the result of this fresh inspection confirms our view that it is very valuable." Mr. Jesson, in his report, dated August 29, 1895, says:—"I know Mr. Gray's lease No. 166, and believe it to be a first-class mining property, which, having the same reefs, should give as good returns as the adjacent leases owned by the Golden Crown, Limited."

THE MAORI GOLD MINE (LIMITED).

The capital of this company is £70,000, in shares of £1 each, and it has been formed, *inter alia*, for the purpose of acquiring and developing certain mining property and claims known as the "Maori," the "Maori East," and "Maori West," situated in Menzies, in Western Australia. The property and claims are situated in the well-known Coolgardie gold fields, and have an area of 36 acres. The property and claims are at present vested in Mr. C. J. McMahon, but it is intended that they shall be, as soon as practicable, transferred to the company. On April 7, 1895, Mr. John W. Archibald, M.A.I.M.E., consulting engineer to the West Australian Exploration Company, reported to Mr. C. J. McMahon that lease 3059 "is the most valuable part of the property. The main reef is situated within about 2 chains of the north-east boundary, and as the underlay is south-west the location covers most of the deep levels of the reef. No. 1 shaft is sunk on the underlay of the reef to a depth of 25 feet. The reef here is about 2 feet thick. The walls are smooth and well defined and the reef has all the characteristics of a true fissure vein. Gold, both coarse and fine, is shown throughout all the stone broken, and the reef faces, as shown in each end and the bottom of the shaft, exhibit gold consistently. An average bulk sample of all the quartz broken in the shaft gives the high return of 27 ounces 8 dwts. per ton. The mine is one of great promise, and I see every reason to believe that the gold values will be maintained through the deeper levels." On June 18, 1895, Mr. F. Backhouse, M.A.I.M.E., mining manager to the West Australian Gold Fields, reported to Mr. C. J. McMahon that "there is a well-defined, compact reef of a permanent nature, with one rich chute of stone, which is the main feature of the property, and when this is opened out in extent, and there is every probability of its doing so, this is sufficient to warrant purchase of property at a reasonable figure. At 60 feet vertical, about 70 feet on underlay, reef cut exposing stone with gold plainly visible. Some good stone can be expected to be obtained on opening out further, as reef similar to stone in No. 2 underlay shaft, where rich stone already obtained. I should think that with slight expenditures of capital in erecting small plant—(say) 5 head stamps—this mine should yield sufficiently good returns to pay a fair dividend on a limited capital, so cannot but recommend as a good investment on present prospects." A favourable report has also been written by Mr. J. W. Archibald.

MICA IN SIAM.—The discovery of mica in Siam is likely to introduce into that country another new industry. We are informed that the quality of the mineral mined, up to the present, is good, and there seems to be no reason why the mining of the mineral in quantities should not prove a commercial success. We would here point out to those engaged in the industry, or intending to pursue it, to introduce into their working modern methods of mining, and to abjure such slipshod and unscientific ways as commonly prevails in this country, by which the greater part of the mica raised is unsaleable and commercially useless until it is ground down, or in some form or other, takes a part in making up the many varieties of so-called lubricants and boiler-covering compositions. Of course, the working up of rubble mica into such marketable commodities is better than that it should go to waste, and anything in this direction is commendable, but what we intend to draw attention to is, that efforts in mica mining should be chiefly directed towards the obtaining of blocks as large as practicable, to produce sheets of fair size, which can always demand a good price in the markets, both locally and abroad; for the sale price of mica sheets rises by leaps and bounds, as the dimensions of squares or oblongs which can be cut from them increases. It is only by careful and skilled mining that this can be obtained, and it will be no loss to investors to procure the best men for the purpose. It will in the end prevent those disheartening results from which the mica industry in this country is suffering, and which is proving an absolute bar to its development in the degree it merits. The demand for the mineral in its best qualities is largely on the increase, and it will be well for our friends in Siam to foster the industry by every means in their power.—*Indian and Eastern Engineer.*

On Warm Creek, Idaho, about four miles from American Falls there is some novel mining going on. The ground which is a light granite soil, is ploughed, scraped into a dump and then shovelled into sluices. There are 10 men at work and they run two shifts, making \$75 per shift. The peculiar thing about this is that it is the only instance in Snake river mining where gold is found in large and paying quantities in the soil. Heretofore it has always been the practice with miners to strip off the soil to a depth of 3 to 10 feet or more, according to the formation. It is against the experience and science of miners to find placer gold anywhere except in gravel, and usually miners would not look for it anywhere else. The man who made the discovery on Warm Creek is not a miner, but "gold is where you find it." There is a great amount of mining all along Snake river in the vicinity of American Falls this season.—*Mining and Scientific Press.*

COMPANY FINANCE.

Reports, Balance Sheets, Dividends, &c., of Mining and other Companies.

La Plata Mines (Limited).

In sending notices of the final call, the directors explain that it is necessitated by the improved position of the Gold Fields of Mozambique, and the requirements which the latter company has to provide for, contingent on its larger area of operations. With the circular they enclose another, giving the latest news regarding the properties in which the company is interested. There are respectively:—Lion (Mozambique) Gold Company (Limited), Tiger (Masi Kesse) Gold Company (Limited), and the African Aluvial Gold Mines (Limited). The shareholders are also informed that, in regard to the company's silver property at Leadville, this is still being worked under lease, and is making a small return for the company without any expense or liability being incurred by the company in maintaining the mines, machinery, &c. The directors anticipate being in a position very shortly to lay before the shareholders a satisfactory account up to date, together with a programme such as will, in their opinion, prove to be one which should result in a very appreciable increase of business and prosperity to the La Plata Company.

Frontino and Bolivia Gold Mining Company.

The directors have received advices from the mines, dated July 23 and August 7. Also a letter from Messrs. Restrepo, dated July 12. The statement for the month of July is as follows:—3370 tons produced—bar gold, 2845 ounces; tributaries gold produced—bar gold, 185 ounces; total, 3030 ounces. Also 55,941 lbs. of sulphurates, valued at £951 7s. 9d.; estimated value of the gold and sulphurates, £7670 3s. 4d.; cost at the mine, £611, and in London, £6780 15s. 8d.; estimated excess of returns, £880 7s. 8d. The dry season still continues, but rain is expected about the middle of August. Advantage has been taken of the dry season to proceed vigorously with the new work. Hence the heavy expenditure during the month.

Guelph (Coolgardie) Gold Mine.

The following is a copy of Messrs. Johnson, Matthey, and Co.'s certificate of assay, dated September 18, of the sample of quartz from this mine submitted to them:—"We have assayed the sample of quartz as under, and find the following to be the result: Weight, 40 lbs.; produce of gold, 56 ounces 15 dwts. 12 grains; produce of silver, 7 ounces 3 dwts.; per ton of 2240 lbs. quartz.—(Signed) Johnson, Matthey, and Co."

Buluwayo Gold Reefs Development.

We are informed by the secretary that a communication has been received from the manager from Johannesburg *en route* for Buluwayo, and that he is expected to be on the property in the course of a few days. Also, that 62 cases have been dispatched by the company, containing rock-drills, tools, and other necessities for development work.

Brown Hill Extended, Limited.

We are officially informed that the titles of this property are perfect, and have been vested in a trustee on behalf of the company.

—The RIO TINTO COMPANY (LIMITED) announces payment of the coupon attached to the Provisional Scrip Certificates of their 4 per cent. first mortgage bonds, 1895. They invite holders to present coupons at once.

—The ANGLO-MEXICAN MINING COMPANY (LIMITED) have declared a dividend of 2s. per share (10 per cent.) payable at the company's bankers, Messrs. Glynn, Mills and Co.

—We are informed that Mr. A. F. Frampton, of Balcombe Tower, Branksome Park, Bournemouth, a large shareholder in the MURCHISON (WESTERN AUSTRALIA) GOLD SYNDICATE (LIMITED) has joined the board of that company.

—The STANHOPE GOLD MINING COMPANY (LIMITED) have declared a dividend of 10 per cent. payable to all shareholders registered on September 30.

—The TRANSVAAL COAL TRUST COMPANY (LIMITED) announces that the profit for August was £4000. Owing to the short supply of railway trucks, additional expense has been incurred for dumping coal.

—The second and final call of 3d. per share in the POORMAN GOLD MINES (LIMITED) has been made, and is due on Tuesday, October 1 next.

—We are informed that letters of allotment and regret in the SELUKWE CONSOLIDATED are being posted as quickly as the staff can overtake the work. The issue has been greatly over-applied for.

—The AFRICAN GOLD RECOVERY COMPANY (LIMITED) has declared a dividend of 10 per cent., free of income-tax, payable October 28 to all shareholders on the register on October 12, after passing £40,000 to reserve fund, making this £100,000, and carrying forward about £37,000. The board also proposes to issue the 25,000 unissued shares *pro rata* to shareholders at 35s. per share to those on the register on October 12.

—The offices of CHINA (LIMITED) and the ACQUISITION AND DEVELOPMENT COMPANY (LIMITED) have been removed to 160, Dashwood House, New Broad-street, E.C.

—Notice is given that holders of share warrants to bearer of the LILLOOET, FRASER RIVER, AND CARIBOO GOLD FIELDS (LIMITED) who desire to exercise the right of subscribing for their proportion of the new issue of 200,000 shares of £1 each, must lodge their share warrants for examination at the offices of the company, 2 and 3, Old Broad-street, E.C., on or before Monday, the 23rd instant.

—The cheques in payment of dividend No. 5 of 65 per cent., or 13s. per share in the FERREIRA COMPANY, have been posted from the London office, 120, Bishopsgate-street Within, E.C., to all European shareholders registered on July 6, 1895.

—The books of the CHAMP D'OR DEEP LEVEL GOLD MINING COMPANY (LIMITED), in liquidation, have been reopened for the registration of transfers, and will finally close on the 30th inst., for the purposes of liquidation.

—The certificates of shares of the CRESCENT GOLD MINING COMPANY (LIMITED) are now ready, and may be obtained in exchange for allotment letters and bankers' receipts (2s.). In response to the directors' circular recently issued, inviting subscriptions for the balance of the company's shares, the whole of the capital has been subscribed. The Victory Mine, which was referred to at the recent general meeting, has been acquired. In a telegram just received from Mr. Davey, he states:—"Have struck rich ore in vein, average width of vein is 2 feet."

—Warrants for the 7½ per cent. dividend, recently declared by the JOHANNESBURG WATERWORKS ESTATE AND EXPLORATION COMPANY (LIMITED), are being posted.

—The EXPLORATION COMPANY (LIMITED) notifies that certificates will be ready for delivery on the 23rd instant, and will be given up in exchange for the old certificates, allotment letters, and banker's receipts on and after that date.

AMERICAN MINING RETURNS FOR AUGUST.

The following are the returns for August from mines whose shares are dealt in on the London market, and the outputs for the four preceding months are also given:—

Mines.	April.	May.	June.	July.	Aug.
Alaska Mexican	£14,946	£17,773	£17,503	£17,579	—
Alaska Treadwell	£61,591	£71,489	£57,697	£93,144	£83,587
Caratal	—	—	—	—	299
Caylloma	—	—	—	—	10,750 oz
Colombian Hy.	£1,580	—	£2,050	—	—
Do Lamar	£78,405	£78,355	£78,715	£79,555	£81,231
Don Pedro	—	86 oz	126 oz	—	—
El Cal. (and Col.)	2,295 oz	2,326 oz	2,825 oz	2,225 oz	—
Elkhorn	£27,157	£27,287	£26,805	£29,026	£28,032
Gravel	—	£500	—	—	—
Haquebala	£4,700	—	£10,000	£16,650	—
Macate	—	£210	—	£100	—
Mesquital del Oro	—	—	725 oz	8,102 oz	1,391 oz
Montana	£68,600	£75,400	£64,200	£65,400	£64,300
New Guston	—	£31,440	£26,370	£26,500	—
Orita	—	£500	—	—	—
Oro Preto	1,503 oz	1,534 oz	1,536 oz	1,455 oz	—
Pinos Altos	—	£55,000	£55,000	£55,750	—
Pisnac Eureka	£2,389	£2,158	£1,956	£1,980	—
St. John del Rey	—	3,458 oz	3,516 oz	3,573 oz	3,400 oz
Sierra Butte	£1,854	£1,622	£1,470	£1,539	—
Tu Lake Placers	—	—	—	—	£7,150
Many of the companies do not publish the working profits, but the figures which are available are:—	—	—	—	—	—
Mines.	April	May	June	July	Aug.
Alaska Mexican	£1,669	£7,248	£7,003	£7,301	—
Alaska Treadwell	£24,309	£48,026	£55,663	—	—
Colombian Hy.	£1,000	—	£1,250	—	£2,074
Do Lamar	£8,180	£8,341	£8,074	£8,089	£8,074
Elkhorn	£1,083	£994	£1,001	£1,349	£1,360
Frontino	£1,087	£2,324	£481	—	£880
Herquishua	—	—	£2,112	—	—
Montana	£17,000	£14,100	£14,000	£15,200	£14,800
New Guston	—	£18,140	£10,220	£10,550	—
Orita	—	£200	—	—	—
Pinos Altos	—	£13,000	£12,465	£11,700	—
Pisnac Eureka	£971	£470	£402	£378	—
Sierra Butte	£717	£408	£279	£354	—
Silver King	—	—	—	—	21,000 oz
Telima	£700	—	£2,000	—	£00

The Prospectors of Matabeleland (Limited).

The following is taken from a letter just received from Mr. Needham, who is on his way to Buluwayo to commence his duties as general manager:—"As I am unable to be present at the statutory meeting of your company, when a statement from myself would probably be acceptable to the shareholders, I considered that, as an alternative, a letter which could be used by you, if deemed necessary, would be appreciated. With regard to the general statements made in the prospectus regarding the prospects of Rhodesia, there is no doubt but that the probabilities therein expressed have in view of later news received from South Africa, been further strengthened and confirmed. Developing work is daily proving, not only the permanency of the reefs, but the probability of large gold returns when milling is commenced. The state of efficiency already reached in the development of certain properties has warranted the ordering of large milling plants, and it is quite anticipated that by the end of this year one or two batteries will be in full swing. This being done under the direction of some of the best known mining engineers, speaks for itself in regard to the value of the properties. With regard to the several properties acquired by 'The Prospectors of Matabeleland (Limited)', I think the shareholders have every reason to feel assured and satisfied w'th their investment. Generally, and I am endeavouring to write impartially, I consider the mining claims acquired by this company, in comparison with those acquired by other recently-formed companies, second to none. No Rhodesian prospectus issued within the past two months can show an equal number of claims so well prospected. This is not a matter for opinion, but a matter of fact."

ARIZONA can furnish a pretty good story as well as pretty good mines. Among the mines of Arizona was the famous Vulture, now the property of H. A. W. Tabor, 15 miles south-west of Wickenburg, whence the ore were taken by wagon to be milled on the bank of the Hassayampa. The mine is credited with having produced over \$10,000,000 in gold. In those days nothing save the best was milled, and in the waste dumps was found the building material for the town of Vulture. The mine worked on for a score of years with varying fortune, the town maintaining a large population, when the pipe line from the Hassayampa was washed away by the flood that followed the breaking of the Walnut Grove dam, the 100-stamp mill was closed down, and the camp was deserted. Three years ago T. E. Farish secured a two years' lease of the property, fitted up 10 of the stamp, put in a gasoline engine, got his water out of the mine and started to "cavorting" on the lower levels. Near the end of his lease he ran out of really good ore. In this extremity he bought himself of the scores of tenantless houses. Every one was constructed of free-milling iron oxide gold ore, and specimens chipped from the corners averaged an average of \$20 to the ton. The veracious chronicler of the Hassayampa avers that for the last 90 days his stamp mill has run solely upon building material, much to the profit of its owner.—*Mining and Scientific Press.*

A NEW FIND.—Some exceedingly rich specimens of stone have been brought in by Mr. Birks from a new find made by his party 170 miles due north of Coolgardie, and five miles south-east of Mount Malcolm. The stone is new in appearance, being a bluish quartz showing a kind of cement casing. The specimens are

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London: SEPTEMBER 21, 1895.

THE NEW PRIMROSE COMPANY.

ONE of the soundest and most promising, and certainly one of the most prominent, of the South African mines is the New Primrose, the shares of which are by no means up to their intrinsic value. There is room for a further increase, and considering that the prospects of the company are not only brilliant, but absolutely certain, it is a wonder that the encouraging return for August—the best so far in the company's career—has not been instrumental in creating a greater and wider demand for the shares. In the present state of excitement, when little calmness and consequently little judgment prevail, it is difficult for the *bona fide* investor, who has no ambition to speculate, to select some sound property for the investment of his money. To such a person the New Primrose Company can be recommended, for as far as certainty in mining goes, the future of this concern is assured. It was at the close of June and the beginning of July that this company became specially prominent, and such a demand for the shares set in as to send them over £8. This price was certainly justified by the then position of the company, and no critic could arrive at any other conclusion than that the price was but moderate after all. There was every indication then that the price would keep on steadily rising. As a matter of fact, however, the fluctuations have been

considerable, and during the last fortnight they have not been regarded with any special favour. It is impossible, however, for them to remain at their present price, for when the additional stamps are erected and at work the output will greatly increase, and it is estimated that the profits will augment by some £5000 per month. The dividend for the first half of the present year amounted to the respectable sum of 25 per cent.; for the current half, of course, it will be much larger, and next year the increase will, undoubtedly, be very substantial. The purchase of these shares, therefore, at their present value, would be a prudent investment. Since July the position of the company has improved in accordance with the predictions of critics, and thus it seems the more strange that the rise which took place upon the better improvement has not continued. This mine is most capably managed, and is one of the most economically worked in the whole of South Africa. Anything over 5 dwt. can be made to pay, and it is only the lowest grades which are left lying in the stopes; rock of 7 dwt. will return good profits. It was at the beginning of June, as we have stated, that the fortunes of the company took a remarkable turn for the better. The North reef was then found at both the 9 and 10 feet levels, 8 feet wide, and assaying 17 dwt. The property of the company is divided into three sections—the Western, in which the main shaft is situated; the Central, opened by the Moss Rose shaft; and the Eastern, exploited by the Old May Deep. In the Eastern section the North reef only had been worked, but it was in consequence of this being cut out in the upper levels by a dyke that it was feared it would not be found in the Western section. However, it was found, and, therefore, must be considered as a very important factor in estimating the future of the mine. The Middle reef, from which most of the richest stuff has hitherto been crushed, is, perhaps, the best on the property. It has shown itself to be permanent as depth is attained, and its value is increasing every month. The Main reef hitherto has been very poor in places, but owing to the economical management it has been made more payable during the last few months, and, therefore, it must also be considered as a very important feature of the mine. The ore reserves at the end of June amounted to 244,000 tons, or close upon ten months' supply for the present year; but, of course, even this large quantity has been greatly added to since then. The monthly profits have been averaging between £17,000 and £18,000; but, as we have already said, when the new stamps are added, this will increase to considerably over £20,000. Various estimates have been made as to the probable life of the mine, but if we take it at from 25 to 30 years we shall probably be correct. We do not think that this is likely to be an over-estimate. Thus, taking the probable profit per month at from £22,000 to £23,000, and the life at 25 years, it will be seen at once what a sound investment it is.

WHAT IS ALLUVIAL GOLD?

THE above apparently trivial question, which looks at first sight as though its proper place were a schoolboy's examination paper on elementary geology, will, if we look into it, be found neither as unimportant nor as simple as it appears. Its importance may be guessed from the fact that it is the burning question of the moment in some parts of Western Australia, and accordingly fills a large portion of the columns of the newspapers that are now reaching us from that corner of the globe. In nearly all gold mining countries alluvial claims are held under conditions very different from reef claims; possession of the one by no means necessarily implies that of the other; the area granted as an alluvial concession is different from that given when reefs are to be exploited. In a word, the gold laws all the world over distinguish most clearly between alluvial gold and reef gold. This being the case it is a little strange that no gold law has attempted to pronounce what constitutes the one and what the other variety, and that a definition of alluvial gold still remains to be formulated. The dictionary does not help us much; WEBSTER's definition of alluvial is "of river origin or formation," extended, however, to the more general one "of fresh-water origin." Typical alluvial gold would, therefore, be gold occurring in rolled granules or scales in a gravel bed consisting of rounded boulders, pebbles, sands, and clay, the whole deposited simultaneously by the action of a stream of running water. No better example can be quoted than the wonderfully rich shallow alluvial deposits in such creeks as the Melones creek, in Calaveras county, California, the name Melones having been given to this creek by the Mexicans because the rounded, flattened, oval grains of gold reminded them of melon seeds. Given a quartz reef containing coarse gold, subjected to disintegration, and with a stream of water running over its outcrop or at the foot of the hill, on the sides of which it comes to the surface, and it is clear enough that in the bends and the steeper portions of this creek alluvial deposits of gold will accumulate. This much is simple; nor can the age of the stream, in a geological sense, be held to affect in any way the character of the deposit, so that gold

So far it would seem as though the question were too simple to perplex any experienced geologist, who can always tell whether the constituents of a deposit were or were not of alluvial origin, however complete may have been the metamorphism that the deposit has subsequently undergone. The difficulty, however, lies in this that the definition we have been using is a purely genetic one. We are compelled to define alluvial gold as gold that has been formed in a particular manner, and this is obviously a point that cannot be decided by direct evidence, but alone by inductive reasoning. Unfortunately, the very question how nuggets were formed is one upon which geologists are divided into two very opposite camps. There is a complete consensus—indeed, there can hardly be two opinions as to how the small-rounded grains, to which we referred above, have been produced, but the mode of formation of large nuggets is very far from being settled. Some geologists hold that large nuggets were produced, like the smaller grains, by the disintegration of reefs and subsequent transportation by water of the huge masses of gold so liberated. Others maintain that this explanation is utterly inadequate to account for all the observed facts, and that nuggets have been formed *in situ*, and have grown from a small nucleus, mostly a grain of gold, by the deposition of gold from a solution of that metal in meteoric waters. Much may be, and very much has been, said for either view. "Who shall decide where doctors disagree?" We, for our part, have no such pretension; we merely chronicle the fact that these conflicting views are held by men of the greatest eminence in their profession. It is, however, evident that the existence of this two-fold view as to the origin of nuggets makes their classification by a genetic definition a very difficult matter. If the definition of alluvial gold as gold that has been carried by fluvial action be accepted, and if the views of these geologists who consider nuggets as having been formed *in situ* should prevail, we should then find ourselves in the absurd predicament that an alluvial digger is entitled to the small grains of gold, but not to the big nuggets. We do not know how the lawyers would settle this point, but we know something of alluvial diggers, and we venture to prophesy that if such a *bizarre* interpretation should ever be held as sound in law, big nuggets will become alarmingly scarce. Obviously, the safest course will be to set genetic definitions aside, and to define alluvial gold as water-worn gold, contained in a bedded deposit of water-worn materials. Then the fact that one particular piece of gold is not water-worn, whilst the remainder is, would not take the deposit, which must be judged by its general characters, out of the category of alluvial, and this is clearly as it should be. We should thus also be able to distinguish sharply between what are and what are not true alluvial deposits. Thus the "banket" of Johannesburg, though a bedded deposit of rounded water-worn pebbles, just like in this respect the "concentrate" of California or Australia, is not an alluvial deposit, because the gold is not water-worn, but on the contrary is highly crystalline. For the same reason, the nuggets of gold found in the loose drift on the surface of Devil's Kantoor, in the south-east of the Transvaal, is not alluvial gold, because it occurs in sharp-edged, unworn crystalline masses. On the other hand, the loosest gravel or the hardest cement containing gold in water-worn rounded grains or masses is a deposit carrying alluvial gold; must inevitably be so considered, and cannot but be subject to the laws and regulations that govern alluvial gold mining.

BRITISH COLUMBIA'S FUTURE.

SUBSCRIBERS and readers of *The Mining Journal* are aware of the efforts we have continually made to enforce upon the scientific and investing public the claims of British Columbia. We have published evidence from time to time conclusively demonstrating the richness as well as the great advantages which this colony possesses for the successful development of its mining industry. It is strange that in spite of this evidence people still display a somewhat marked contempt for the colony, but we think we now observe signs that this neglect will not continue much longer. At the present moment the many properties exploited there are assisted solely by American capital, very little English capital—in fact, scarcely any—having found its way there. It is agreed upon by all experts who know anything of the country, that it is not only extremely rich, but that the facilities for working—transportation, labour, &c.—are abundant, in fact, that they compare extremely favourably with the advantages possessed by other more prominent gold fields. At the present moment there is a local gold boom raging, due to the promising discoveries that are continually being made in various portions of the colony. In consequence of this, miners are rushing there by thousands, and gradually, but only too surely, the attention of the outside world is being attracted in the same direction. In a paper recently read before the Royal Colonial Institute, Professor Sir G. M. DAWSON, K.C.M.B., F.R.G.S., Director-General of the Royal Geological Society of Canada, stated that the Cordilleran belt had, whenever it had been adequately examined, proved to be rich in precious metals as well as in other ores; and though some parts of this ore-bearing region are undoubtedly richer than others, generally speaking it is throughout a metalliferous country. "The Province of British Columbia alone from south-east to north-west includes a length of 800 miles of the Cordilleran region, and adding to this the further extension of the same region comprised within the boundaries of the Dominion of Canada, as a whole, its entire length in Canada is between 1200 and 1300 miles. Circumstances have favoured the development of the mines of the Western States of the Union, but it is as nearly as may be certain that the northern half of the similar region will eventually prove equal in richness to the southern; and when the mines of those Western States may have passed the zenith of their productiveness, those of the North will be still increasing in

this respect." The Professor then pointed out that, in addition to gold, British Columbia is extremely rich in numerous other minerals. Here may be found large deposits of iron, whilst copper ores have also been discovered in many places. Mercury, in the form of cinnabar, promises to be of value in the near future, whilst plumbago, mica, and asbestos are also known to exist. Coal, likewise, is abundant, and at the present moment rests on a substantial basis of increasing prosperity. Mr. JOHN B. HOBSON, in the course of his speech before the Chamber of Mines, in San Francisco, in December, 1894, enthusiastically exclaimed: "I do not hesitate to predict that the day is not far distant when the gold output of British Columbia will astonish the civilised world." Had we space at our disposal, we could, of course, enumerate the confirmatory opinions of many other experts, but we have sufficient evidence, we think, to say that British Columbia is a country destined to come to the front, and that in the not distant future, and it will be strange if English capital is longer withheld from it.

The interests of the colony were enthusiastically advanced by the Chairman at the extraordinary general meeting of the Lillooet, Fraser River, and Cariboo Gold Fields Company held this week. The object for which the meeting was convened was to increase the capital of the company to £300,000, by the creation of 250,000 shares of £1 each. If we were to rely exclusively upon the statements made at the meeting, as well as upon the reports of the experts, from which the Chairman quoted at considerable length, we could arrive at no other conclusion than that the company was destined to become highly successful. It is necessary, however, to put a certain discount upon the statements delivered at meetings, for it is always one of the objects of the Chairman to put as rosy a complexion on the affairs of the company as he possibly can. The above company is not a new one. It is an old concern which, so far, has not been conspicuously successful. One reason advanced for this was the neglect of the shareholders to subscribe the necessary capital. To obviate this difficulty, therefore, the directors have now invited them to subscribe this additional capital. The shareholders have unanimously consented to do so, but it is questionable whether they would have subscribed it had the directors of the company not come forward in the handsome manner they have done. For instance, one director has subscribed £30,000, another £20,000, whilst the Chairman has induced his firm and friends in the country to subscribe £40,000. Of course, this is conclusive proof of the faith the board have in the prospects of the company, and no doubt it is one of the reasons why the shareholders have so unanimously adopted the new provisions which were laid before them at the meeting. The board is undoubtedly a powerful and influential one, and they appear to be greatly satisfied with having secured a manager in whom they place the greatest confidence. Whilst developing the Lillooet properties, they have also been prospecting and examining claims and mines throughout the whole of British Columbia, and have succeeded in securing several properties which appear to be very promising. The Chairman at the meeting gave details of the present position of the six properties which have been selected, and judging from these there is every appearance that the mines will turn out very valuable. As for the resolutions which were adopted at the meeting, these appear to us very reasonable, and though criticism might with advantage be directed to one or two particulars, still they are not of sufficient moment to be energetically advanced. For instance, we see no reason for increasing the board of directors to nine. We think that a smaller directorate would be quite sufficient to manage the affairs of the company, and certainly it would be more economical. As the board have hitherto received no remuneration, one cannot find fault with them for making a provision for guaranteeing them individually a minimum sum of £200 per annum, but we think that they might, with some consideration, have allowed for an additional 10 per cent. out of the profits a little later on. However, as this is a matter for the consideration of the shareholders, and as the latter are quite in favour of this provision, it is no concern of ours. Should, however, the future not turn out as successful as the directors anticipate, this provision may perhaps go against them, and to some extent alienate sympathy.

NOTES AND COMMENTS.

HERE have been several statutory meetings held this week, and no doubt we shall be quite overwhelmed with them for sometime to come. These meetings, of course, are simply held to comply with the dictates of the law, and at very few indeed do we hear anything which is likely to foreshadow what the future will bring forth. Westralia (Limited), the shares of which have been in considerable favour of late, is one of the few exceptions to this rule. The statutory meeting was held on Monday, much before the time, therefore, when it should have been held in accordance with legal requirements. No doubt the directors, thinking they had done extremely well, were anxious to meet the shareholders, to impart to them the cheerful news of the early success which had attended their efforts. The company has acquired a concession for the exclusive right of supplying electric light to the municipality of Coolgardie for 21 years. This concession has been resold to a company formed for the express purpose of taking it over. This latter company is called the West Australia Electric Lighting Supply Company. We are certainly inclined to agree with the Chairman that it is somewhat of a feather in the cap of Westralia (Limited), that so young a company should have had the privilege of conferring upon the township of Coolgardie the great advantage of substituting, in place of the present primitive lighting, the latest mode of lighting that science so far has invented. In addition to this, the Chairman informed the shareholders that they have acquired a mining property in Coolgardie upon which a great amount of development work has been done

which company they hope to bring out within the next few weeks. They have also arranged the terms for the purchase of another mining property, the whole of the working capital of which has been guaranteed. In answer to a question, the Chairman announced that the estimated profit already made of the contracts of the company comes to very nearly the amount of its capital. If the progress of this concern keeps on in the same ratio, undoubted prosperity is awaiting it.

ANOTHER statutory meeting was that of the Orion Belt (Limited), which, as may be inferred from its name, is a South African concern. Unlike Westralia (Limited), the directors have allowed the limit of four months to elapse before convening the meeting, being anxious, no doubt, to obtain as much encouraging information as possible to lay before the shareholders. The capital of this company is £250,000, in shares of £1 each, the whole of the working capital being subscribed privately. It was formed to acquire and to work 406 claims adjoining the properties of the Orion, Minerva, and the South Orion. The claims are situated about eight miles from Johannesburg, on the Black Reef series of reef. Unfortunately, this series has not a very high reputation for richness, and very possibly this fact might influence some people to regard the company's future doubtfully; and this we are inclined to do ourselves, in spite of the wonderful cable received from Mr. Chouan, in which he stated that, in his opinion, "the property is one of the biggest and most valuable on the Rand." Although the shares stand at a fair premium, this is no evidence whatever of the value of the property, as many instances might be produced to show that the shares—especially of South African companies—are far in excess of their real value. We hope, however, that the property will prove a great success.

THE statutory meeting of the Witpoortje Gold Mines (Limited) was also held this week, and naturally all that the Chairman was able to do was to quote the opinions of experts on the position and probable future of the company. The property is situated about 18 miles west of Johannesburg, and as two good roads run close to or through it, and as the railway is only about 5 miles away, the property as regards transport is extremely well off. In addition to this, as the Chairman announced, with much satisfaction, coal can be delivered on the property at about 20s. per ton, while last, but not least, there is a splendid supply of water for all mining and milling operations. The company owns 53 claims in one compact block, to the south of which is the farm Vlakfontein, and to the east the farm Roodepoort. On the latter farm are situated the well-known mines Durban Roodepoort, United Main Reef, Princess Estate, and Banket. Three well-known experts in South Africa have reported very favourably on the company's property, and from their reports the Chairman quoted at some length. The policy of the directors, as announced by the Chairman at the meeting, is one heartily to be recommended—one which, indeed, the directors of too many mining companies do not carry out. It is not only the most minerlike policy, but it is the fairest from a shareholder's point of view. It is their intention first to open up and develop the property, and after they have ascertained its value to proceed to purchase and erect the necessary machinery. This is certainly putting the horse before the cart, but others generally commence by putting the cart before the horse, and thus instead of making progress, they make headway in an opposite direction.

IT is too early yet to attempt to forecast the future of the Mines Selection Company, but, judging from the signs of the times, and from the persons who are directing the affairs of the concern, there need be but little despondency as to the future. As might be gathered from its title, the object of this company is to examine and select in all parts of the world properties which have promising indications. A company of such a character, of course, must have in its service mining engineers of ability, repute, and integrity. The Mines Selection Company is well served in this respect. Mr. Walter McDermott, who is its Chairman, is a gentleman whose name is known throughout the world, and no one who has the least knowledge of him, direct or indirect, would hesitate to place his interests in his hands. Another well-known engineer, who has acquired an enviable reputation, is Mr. R. J. Frecheville, who, some time ago, proceeded to South Africa to represent the company there. Of course, the Chairman at the statutory meeting last Monday could say very little as to what had been done already, for it requires, of course, considerable time for an undertaking of this nature to get into working order. In West Australia, we are informed, the company have two experienced mining engineers looking after its interests, and they have lately acquired a large block of mining property in the celebrated Hannan's district. This property, upon which a very favourable report has been made by the company's agent, will shortly be floated on the market. In the United States a great number of properties have been offered to the directors, which, of course, they are considering. We certainly think that with such a board of directors to represent them the interests of the shareholders will be well conserved, and we can consequently look forward to the future with a great amount of hope.

ANOTHER exploring company, formed with the object of selecting properties in Western Australia, is called "The Gold Explorers (Limited)," the statutory meeting of which was held this week. This company has recently been reconstructed, and it is not surprising, therefore, considering the facility with which capital in these days is subscribed, that the reconstitution was a success. As a result of the strengthened financial position of the company, the Chairman was able to announce that already considerable progress has been made in selecting and acquiring certain properties. One has been selected definitely, and is situated on the Premier line of reef, which the Chairman announced is identical with and in the same position as

that of the Miner's Dream and other properties of a similar character existing in the Coolgardie range. An option to purchase this property has been secured on very favourable terms, and the directors have cabled their agent at Coolgardie to inspect and send a telegraphic report, and as soon as this done it will be issued to the public. The Chairman also announced that a reef has already been proved on both sides. In addition to this property the company possesses the Bayley's South Consolidated property, which is situated in the immediate vicinity of Bayley's Reward. A splendid opportunity is afforded at the present moment to exploring companies to earn immediate and large dividends, and undoubtedly the great object of the directors of such companies should be, not to let the grass grow under their feet. The Board of the Gold Explorers (Limited) seem to be alive to this fact, and the result of their united energy, so far, has been extremely gratifying.

THE shareholders of the Coongarrie Gold Fields (Limited) seem, from all accounts, to be in for a pretty good thing. The statements delivered at the statutory meeting this week must have filled them with much enthusiasm and hope, and it is not at all surprising that the meeting passed off with such unanimity. The company seems to possess in the Boddington Mine a property of rare promise. This mine was not acquired until after it had been considerably developed, and when every facility was afforded to the agents of the company to gain some idea of its value. For instance, several shafts had been sunk at different points along the line of reef. The principal shaft was down 113 feet, exposing the reef from top to bottom without a single break and widening out from 1 foot 8 inches to 3 feet 6 inches. Development has since been continued in this shaft with the result that the reef improves as depth is attained. Most favourable reports have been made upon the property by experts of reputation, and a great deal of value must of course be attached to the opinion of Mr. Seymour. It will be remembered that extracts from this gentleman's report were published in the prospectus, in which he stated that samples of quartz taken from the shaft had yielded over 4 ounces to the ton. In that report he recommended the property as a permanent investment. Mr. Chas. Crossland is also quite assured of the permanent richness of the mine, and he, therefore, expresses his conviction in no equivocal manner. As a matter of fact, it seems to be the opinion of everyone who has examined the property that it is a very valuable one. Mr. Veitch, one of the directors, is on the spot, and he has cabled his own opinion to this effect. It is possible, of course, for people, and even experts, to be misled by appearances, and thus, perhaps, it would be premature to assert that this property will turn out extremely valuable. All that can be said is that appearances are certainly in favour of this, which, after all, is a great deal to assert.

No one will be inclined to adversely criticise the decision of the shareholders of the Emerald (Reward) Gold Mining Company in adopting the scheme of Mr. Porritt, as laid before them in the circular of July last. The property which the company was originally formed to work has proved so far disappointing, and this being so, there seems to be nothing for the shareholders to do but to develop it further, and to acquire others. The proposals put before them by Mr. Porritt—which, of course, he thinks will ultimately make up for the disappointment—puts a different complexion on the position of the company. As the Chairman said, and as everyone seems to agree, it would be bad policy to dispose of the Emerald property. It is well that under the circumstances the directors have no need to ask for further capital. They seem to have been economical in spending that which in the first place was placed at their disposal. The £8000 which they have in hand will go a long way in developing the Emerald property, and also the others which they are recommended to acquire. Of course, as the Chairman indefinitely announced, the shareholders must look forward to the possibility, yes, the probability, of finding further capital, but when this necessity arrives further evidence will be laid before them as to how these other properties are likely to turn out.

It is very rare, indeed, now to hold in the City meetings of Californian gold mining companies. One of the signs of the times, however, is the flotation of new companies possessing properties in nearly every gold mining region in the world, so that it is quite in the order of present things that we should hear of the statutory meeting of a new Californian gold mining company. The name of this new concern is the Bann-r Gold Mines (Limited); and judging from the statements delivered at the meeting, and the report that has been made upon the property by a Californian expert, there would seem to be a very prosperous future awaiting the company. Some few weeks ago we published a paragraph giving a few details of the company and the property which it owns. There was no prospectus issued, the capital being subscribed privately. It appears to be an old property, given up a few years ago after the shaft had been carried to the 300 feet level, "owing to the broken country encountered, and," in the opinion of Mr. Lowe, "to an erroneous opinion as to the value of the Amosky vein to the east." If we were not accustomed to listen to glowing statements at statutory meetings we should be inclined to be extremely hopeful of this concern; but our experience always dictates calm judgment, and, therefore, we refrain from saying decidedly that the mine is likely to turn out extremely valuable. Indications are certainly in favour of this, but many things may happen to alter them. It is our sincere hope, however, that the company will be as successful as many other Californian concerns have been, for every success is calculated to benefit the mining industry at large.

THE mining market was, on Saturday morning last, thrown into consternation on the news of the death of Mr. F. A. Thompson,

son, a gentleman who had identified himself prominently with the formation of West Australian companies. In connection with these, Mr. Thompson was very widely known and respected. From the very first moment West Australia became prominent, Mr. Thompson was one of the first and one of the most eager to advance its interests. He sought every opportunity of praising its vast mineral wealth and prospects, and was a thorough believer in its future. He was not brought up originally to the mining industry, but first of all applied himself to the legal profession. This, however, not proving congenial to his nature he followed the bent of his inclination, and began to devote himself to mining. His first experience was gained in Mexico. After leaving the latter place he stayed for some time in Colorado, where he successfully visited the mining centres in this State. He subsequently went to the Transvaal, where he became connected with the Henry Nourse mine, and, along with Mr. Curtis, located the Village Main Reef. From the first he was a confirmed believer in the Deep Levels, and, of course, the recent development of these was to him a source of considerable gratification. It was naturally feared that by his death a great number of the shares held by him in the various West Australian companies would be thrown on the market, but letters have been published in the Press from a gentleman appointed to advise his widow, stating that no apprehension of this kind need be created.

THE progress of the American iron trade boom is astonishing; even the Americans themselves—or, rather, its rapidity is. The stoppage for nearly two months of the mines which furnish about one-third of the entire ironstone supply from the Lake Superior region has frightened some of the pig-iron consumers. They have hastened to provide for winter wants, and about a dozen large concerns have secured four to eight months' supplies of raw material. This fact explains largely the extraordinary prices which crude iron has reached within the last two months. During the past three months Bessemer pig-iron has seen successive advances, amounting to as much as \$5 a ton, and grey forge iron \$3. Finished iron is now beginning to go up. The Western Bar Iron Association have recently met and put up prices \$2 per ton; whereupon the manufacturers of cold rolled shafting advanced rates at one stroke \$10 per ton. The demand for steel plates made in the Pittsburgh district is stated to be greater than for 40 years past for boiler, fire-box, and similar descriptions. Some of the works are full up, and will accept no orders at any terms for three months. Will it last? is the question now being asked on both sides of the Atlantic. Many hold that the demand is so far ahead of the output that prices are bound to stand for some time yet, whilst others are of a directly opposite opinion. The autumn and winter can alone solve the problem. Meanwhile English iron and steel manufacturers are benefiting by the high American figures, which allow us in some lines to get in and undersell.

THE MINING MARKET.

FRIDAY EVENING.

A Pressure of Official Liquidations and a Jewish Holiday Unite to Check Fresh Business.—A Dull Finish, with Unimportant Changes on Balance.

THIS has been a week of indecision—almost of suspended animation—in the Mining Market. When we last wrote we stated that the Settlement, although nominally concluded on the preceding Thursday, could hardly then be said to be over. Day after day the selling out for "names" has gone on, the Official brokers having established a record in the volume of business of this class which came into their hands. It is not considered etiquette for a broker to bid for shares under the hammer. The bargains that are to be picked up in this way are a perquisite of the jobbers, and many of those have spent the whole week round the rostrum, to the natural prejudice of ordinary business. The liquidation and weeding out have been on the largest scale that we can remember, and although a dulness of tone was inevitable, the firmness of the market under the circumstances is, indeed, remarkable. An illustration of the manner in which calculations are upset by unforeseen circumstances was afforded on Saturday in the depression of the West Australian market on the news of the sudden death of Mr. F. A. Thompson, one of the largest operators in the securities of this section. Overnight the market had been buoyant, and held out every promise of further improvement. In a few minutes, however, the whole current of affairs was changed, and business has dried up in a manner that far exaggerates the importance of the deceased gentleman's influence. As a matter of fact the pretext for calling a halt was welcomed by the jobbers, who had become thoroughly exhausted with the stress and excitement of the last few weeks' business. On Thursday and to-day the Jewish contingent was conspicuous by its absence, the commencement of the Jewish New Year being observed as a strict holiday. The absence of this enormous factor of support to the Kaffir circus provided an opportunity to those on the spot to offer shares and put prices down. The net result of this action will be that the gains of the Settlement commencing on Tuesday next will be incon siderable, and the Account in course of conclusion will be remembered as including one or two of the dullest days since the boom set in.

The chief event of Saturday was the commencement of the special Settlement in Barnato Consols, which were freely contangoed at 7½ to 10 per cent. The Barnato stocks generally were firm, whilst Land shares were dull. The West Australian market was dull on the death mentioned above, and there was very little going on in Miscellaneous. On Monday the African market opened strong, the departure of Mr. Barnato for Paris and other European centres being put about as a bull point. It was in the stocks controlled by his firm that the greatest activity existed, but throughout the better-class shares there was a revival with special buoyancy in Chartered and East Rand. West Australians, however, did not recover from the depression of Saturday and Miscellaneous were inclined to recede rather than improve. On Tuesday the course of events was very similar to that of the preceding day, Barnato stocks being well supported, whilst weak-kneed operators of the West Australian section showed anxiety to get out of their commitments, with the natural effect of depressing prices. There were isolated gains in Mis

ellaneous, and a fair business was done in Charter Towers varieties. On Wednesday there was a reaction in Kaffirs in anticipation of the Jewish holidays and the Settlement, and following the lead of the Paris Bourse, which had turned seller. The day's changes, however, were insignificant. West Australians were dull to flat, and there was hardly anything doing in Miscellaneous. Things were dull on Thursday, and not much better to-day. "Nothing doing" is the stereotyped bulletia from the House.

South African Shares.

The bull party in Barnato stocks has made the most of "Barney's" visit to Paris and his conference with Sir Edgar Vincent, but the only shares which are appreciably better on balance are Barnato Consols, which were made up for the Special Settlement at 4½, and on the second day at 5, and after advancing to 5½, close ½ better at 5½. In spite of a great deal of talk, little progress is made in hoisting Barnato Banks, which, after being offered at 3½, advanced on Tuesday to 3½ "buyers." The last price, 3½, shows a gain of ½. Buffels were run up to 9½, but close unchanged at 8½. "Johnny's" Investments have been 6, leaving off ½ higher at 5½. Changes of ½ to 1 are shown in Cresus at 3½, Ginaberg at 1½, Glencairn at 4½, May's at 3½, Primrose at 7½, Rietfontein at 5½, and Spes Bona at 2½. Knight's have fluctuated between 9½ and 10½, but close unchanged at 10. A sudden demand put Langlaagte Royal up to 3½, but the gain was not maintained. Some strength was shown in the Robinson stocks during the earlier days of the week, Randfontein touching 4½ and Block B 3 3½. The former shares have eased off to 3 15½-16 on the approach of the Settlement, whilst Langlaagte Estates are ½ better at 6½. An enormous business has been done in East Rand, often to the neglect of everything else in the market. The price has touched 11, and at 10½ marks a gain of just a point on the week. Angelo are ½ down, at 7, and Comets unchanged at 4½. Rand mines have been enquired for by substantial buyers, and mark a gain of 2½, at 4½, the record figure up to the present. Another strong feature has been the buying of Goldfields Deep, which closes below the best at 10½, a gain of ½ on balance. Other Deep Level shares have been quiet. Of the steady dividend-payers, Simmer and Jack have been conspicuous with a spurt of a couple of points to 2½. Ferreira is unchanged at 20½, whilst Salisbury has improved to 5, and Wemmer to 11½. Citys are ½ down at 7, whilst less important declines are shown in Modders at 14½, Jameson at 8½, Heriot at 10½, and Jubilee at 10. So far as the general list is concerned there is not very much of interest to chronicle. Shabs have been widely "tipped" for a rise on cable reports of new strikes of gold; but the shares are only ½ higher at 2½. Luipaards Vlei have been 33½, but close only a shilling to the good at 31½. Rand Gold are rather easier at 7½, 8½, whilst Rand Reefs have slightly improved, at 15½, 16½. The Van Ryn Group has been dull, the parent Company's shares shedding ½ at 9, whilst Norths, after fluctuating between 1½ and 2½, close rather down at 1½. Eastleighs have gained ½ at 2½, but most of the other changes are in the downward direction. Johannesburg Gold Fields have improved 1½ to 11½. The feature in the Land and Exploration section has been the remarkable strength of Chartered, which have been bought in tens of thousands up to 8½. The arrangement of options is said to have had a good deal to do with this movement. The last price, 8½, shows a gain of ½ on the week. Consolidated Gold Fields have recovered ½ at 16½, and Gold Trusts are a like amount better at 10½. Renewed activity has occurred in New Africans, which have changed hands at 10½, but close at a gain of ½ at 9½. Austral Africans have been firm during the week in the neighbourhood of 3. Oceanas are slightly easier at 3½, and Mozambiques have fallen ½ to 2½. The demand for Rhodesian Mining and Finance has continued, satisfactory reports having come to hand as to the progress of development on the various properties. "Bechs" are ½ down at 3½. Anglo-French Exploration have been exceptionally strong at 7½ upwards, closing, however, rather below that figure. A slight relapse in Rand Explorations has afforded the well-informed to get some cheap shares. Henderson's have also slipped back ½ to 4½.

A disposition to sag away has manifested itself in the Lydenburg group, Balkis at 8½, Esteling at 9½, and Graskop at 8½, 9½, being all rather lower. Lydenburg Estates are ½ down at 2½. Some big buying orders from the Cape gave a temporary spurt to Spitzkop in the middle of the week, but the price is practically unchanged at the finish at 1½.

In Diamond shares there has been less excitement than for some time past, De Beers closing ½ up at 30½, after touching 30 on Tuesday. Jagers are without change at 11, but Beaconsfields have scored a gain of ½ at 2½, whilst Gordons are 2s. lower at 11s. 6d.

West Australians.

The difficulty experienced at the last Settlement in carrying over shares in this department has caused a good deal of liquidation during the current week. Shares have been very freely pressed for sale, with the result that a general reduction in quotations has ensued. In the Hannan's group especially, where the rises have been greatest, realisations have been the order of the day, and it speaks volumes for the inherent strength of the market that the depreciation is not more pronounced. As we have hinted above, the death of Mr. Thompson has served as a pretext for sales of all sorts. Great Boulders, in spite of a 2s. dividend, and another extraordinary crushing return, are ½ lower at 6½. Hannan's Reward have fallen ½ to 3½, and Brownhills ½ to 6. True Blue has been in special request, finishing unchanged at 3½, whilst gains of ½ are shown in Hannan's Star at 2½, and Napier at 11½-16. Menzies Reefs are ½ easier at 2½. There have been some excited movements in Associated Gold Mines, which went within a shade of 3 on Saturday, and were offered at 2½ on Thursday. This morning there was a spurt to 2½, with a subsequent relapse to 2½, which leaves the price half a point down on the week. A circular has been issued by a prominent outside dealer, advocating the purchase of these shares, a fact which has probably actuated the inside dealers in bashing the market. Bayley's Reward had a sudden jump to 12s. 6d. on Thursday, closing with a gain of 2s. only at 9s. 6d. White Feathers suffered severely during the slump, and were offered on Wednesday at 2½, recovering this morning to 2½, and dropping back to 2½, which is ½ down on the week. Fingall Reefs suffered severely on the news of Mr. Thompson's death, and close ½ lower at 2½. The feature of to-day's market has been the strength of Hampton Plains, which have been largely bought up to 4½, thereby recovering the whole of an early fall. London-derry's are slightly easier at 2½, and Sherlaw's Gold 6d. down at 12s. 6d. The proposed increase of capital will serve as a bonus to holders, the new shares being offered to them pro rata. Lady Loch has gained ½ at 2½, and there are numerous other changes of insignificant importance. As far as the Finance Companies connected with this market are concerned, there has been a disposition to let quotations down. Exceptions, however, are seen in the case of

London and Globe Finance $\frac{1}{2}$ better at 1 $\frac{1}{2}$ premium, and in the new Mines and Banking Corporation, which closes firm at 1 $\frac{1}{2}$, with an upward tendency, as many as 100,000 shares were dealt in on Monday last.

Miscellaneous.

There has been little relativity to the long-continued inactivity of Indian gold shares. Prices are, if anything, rather weaker, Champion Reefs at 4 $\frac{1}{2}$, Mysore at 2 $\frac{1}{2}$, and Oregum at 3 $\frac{1}{2}$. The Towers Group has been quiet, Brilliants being the favourite at about 16s., ex the dividend and bonus of 6d. just deducted. The New Zealand group has been neglected. Waihi at 7, marks a loss of the fraction put on last week. Straits Developments have been a flat market, closing above the worst at 1 $\frac{1}{2}$, or $\frac{1}{2}$ lower than last week. Burma Rubys have been bought, and close 1s. 6d. higher at 2s. Wentworths are unchanged at 1 $\frac{1}{2}$, but Aladdins have put on $\frac{1}{2}$ at 1 $\frac{1}{2}$. Copper shares have not provoked a great deal of attention, Tintos closing 1 $\frac{1}{2}$ better at 7 $\frac{1}{2}$, Mason and Barry the like fraction down at 2 $\frac{1}{2}$, with Tharsis unchanged at 5 $\frac{1}{2}$. Alaska Treadwell at $\frac{1}{2}$ better at 5. A move has been made in Appalachian Exploring, the shares of which have changed hands in large numbers up to 2s. This is the par value of the share. A portion of the capital was offered at a nominal price to shareholders of the old Appalachian Mining Company, in liquidation, who are now enabled to recoup a small portion of their previous loss. A recovery of 2s. in Broken Hills leaves the price to-night at 2.

British Mines.

There has not been any vitality in the Cornish Share Market this week, and, at the moment, there is no disposition whatever even to deal in shares. Holders do not want to sell, and, on the other hand, speculators are not inclined to buy, and until the tin market assumes a healthier aspect, we fear it is useless to expect any activity in shares. Dolcoaths fully paid are about 10s., and 5s. paid 6s. to 6s. 6d., but it will be difficult to buy or sell many shares at better rates. Satisfactory progress is being made at the mine, and increased returns will shortly be made. Carn Brea dull 32s. 6d., and at this low rate surely the shares must be worth looking up. East Pools about 4 $\frac{1}{2}$, and had matters been settled with Wheal Agar these shares would be higher, as the mine is looking well. Tincoff dull at 7. West Kitty entirely neglected nominally at 4 $\frac{1}{2}$. Wheal Greville sellers at 13 $\frac{1}{2}$, and with the least move in tin, higher rates must rule, as the mine is reported to be looking unusually well.

STOCK EXCHANGE SETTLING DAYS.

Settling Days on the Stock Exchange are as follow:—

CONSOLS.

Tuesday, October 1.

STOCKS AND SHARES.

SEPTEMBER.

Ticket Days. Account Days.
Thursday, September 26 | Friday, September 27

OCTOBER.

Tuesday, October 15 | Wednesday, October 16
Tuesday, October 29 | Wednesday, October 30

Contango Days for South African Market:—

Tuesday, September 24 | Saturday, October 12.

THE WHITE PHOSPHATES OF TENNESSEE.

By CHARLES WILLARD HAYES, Washington, D.C.

SHORTLY after the discovery of black phosphate on Swan creek, in Hickman county, Tennessee, prospectors familiar with the Florida phosphate came to the region and began the search for rock similar to that found in Florida. Among these was Mr. E. Slattery, who located at Linden, in Perry county. He gave a piece of the Florida rock to Mr. C. C. Sutton, and the latter discovered on Tom's creek a deposit which bore a strong resemblance to the sample. This proved to be the phosphate breccia, described below, and the country was carefully examined to determine the extent of the deposit. A short time after, Mr. P. L. Smothers discovered in the same way, on Red Bank creek, another deposit bearing even stronger resemblance to the Florida rock. This was the Carboniferous bedded phosphate.

As indicated above, there are two varieties of the white phosphate, distinct in appearance, mode of occurrence and origin, viz., (1) the brecciated rock and (2) the white-bedded rock. Both varieties, so far as known, are restricted to Perry county, although future prospecting may greatly extend their range.

L—White Breccia Phosphate.

Location of the Deposits.—This variety is most highly developed on Tom's creek and upon the west side of Buffalo river, north of Linden. It has been reported, also, from Spring and Lick creeks, south of Tom's, and from Rone's creek, on the north. These streams are north-west of Linden, in Perry county, and flow westward to the Tennessee river in rather wide valleys, from which the intervening remnants of the plateau rise with gentle, rounded slopes. The phosphate breccia is found upon these slopes within vertical range of from 30 to 50 feet, and following the windings of the valley sides, with slight variations in altitude. Its upper limit appears to be the outcrop of the Devonian black shale; but this is somewhat difficult to determine, since the overlying chert deeply covers the surface, and outcrops of the black shale are extremely rare. The outcrops of the phosphate rock are not continuous. In some places occasional boulders only are found, while at others the material covers the entire surface. No work has been done to determine its depth. At some places it appears to rest upon an eroded surface of Silurian limestone, but more often it is simply imbedded in the residual chert. The rock nowhere shows any trace of bedding, either within its own mass or in its relations as a whole to the formations with which it comes in contact.

Composition and Physical Appearance.—The phosphate rock occurs in large, irregular masses, composed of small angular fragments of Carboniferous chert imbedded in a matrix of phosphate of lime. The chert fragments vary in diameter from a fraction of an inch to 3 or 4 inches. They are in every respect similar to the fragmental chert which so abundantly covers the hillsides. The phosphatic matrix, when unstained by exposure to the weather, is generally white or slightly reddish and rather soft—somewhat harder than compact chalk. In some cases the phosphate shows a laminated structure, as though the cavities between the chert fragments had been filled by the deposition of successive layers of material from solution, and sometimes the cavities were only partially filled. Where this concentric structure is shown the phosphate is more dense and purer than the structureless variety.

Not enough prospecting has yet been done to afford a basis for an accurate estimate as to the available amount of phosphate of this variety, but some idea may be gained by considering the length of actual outcrop. Assuming for the deposit a uniform width of 75 feet, it is estimated that in the territory thus far known there are between 40 and 50 acres which would be actually productive. On a very moderate assumption as to the depth of the deposit, this would yield several hundred thousand tons of the material. Of course, careful prospecting may show this estimate to be far above or below the mark.

It is quite probable that further exploration will extend the known area within which this breccia occurs. On long exposure to the weather the matrix crumbles away, freeing the chert fragments which cover the surface, and are undistinguishable from other portions of the widespread and almost universal mantle of chert covering this portion of Tennessee. Hence, where only a few boulders of the breccia are now found at the surface, there may be a more or less continuous deposit beneath the superficial mantle. It is also probable that other deposits may exist which now present at the surface no indication whatever of their presence. This would be especially likely of such as contain an exceptionally small proportion of chert. In most of the breccia examined, the chert fragments make up about 50 per cent. of the rock. At the Ledbetter place on Tom's creek, and also near Beardstown, some rather large masses were observed which appeared to be nearly free from chert. Closely resembling some forms of travertine which are being deposited by calcareous springs, they suggest an analogous origin. These detached masses may be portions of a more extensive deposit of similar material, almost entirely covered by the mantle of chert as suggested above.

Utilisation of the Deposit.—Analyses of the breccia matrix show it to be a high-grade phosphate, and it would probably be found, in most cases, when carefully separated from the associated chert, to contain 80 per cent. of lime phosphate. A sample of the travertinoid rock from the vicinity of Beardstown gave 80-92 per cent. of lime phosphate. Neglecting exceptional occurrences, the ordinary rock matrix and chert together give about 40 per cent. of lime phosphate. This is too low a percentage to be utilised by present methods in the manufacture of fertilisers. The problem for the mining engineer is, therefore, to devise some cheap method by which the crude material can be freed from a portion, at least, of the chert. As stated above, the matrix is rather soft, and shows a tendency to crumble to a powder when the rock is crushed. The chert, on the other hand, is much harder, and breaks into smaller fragments without shattering or crumbling. Hence it appears to the writer probable that if the rock were crushed so as to pass through an inch-mesh, and then passed over a screen with a quarter or third inch mesh, the greater part of the phosphate would pass through with comparatively little chert. If only half the chert were thus removed, the proportion of lime phosphate would be raised from 40 to 53 per cent. This would bring it above the limit of availability for use by methods now employed in the manufacture of fertilisers.

Origin of the Deposits.—From the appearance of these deposits, and their relations to adjacent formations, there can be little doubt that they are recent and superficial, the result of the leaching of the black phosphate and redisposition near its outcrop. It seems probable that surface-water, containing a large proportion of carbonic acid, reached the black shale through the overlying porous covering of chert. The lime phosphate associated with the black shale was dissolved by the percolating acidulated water, which subsequently reached the surface at the outcrop of the shale. The dissolved phosphate was then redeposited, partly in the interstices of the fragmental chert covering the surface, and partly as a solid deposit with but slight intermixture of chert. The former mode of deposition produced the more abundant breccia, while the latter gave rise to the travertinoid masses. Subsequent erosion has, doubtless, lowered the valleys throughout the region, and removed much of the phosphatic deposits thus formed.

If this theory of its formation be correct, the deposits will be found only near the surface in shallow pockets, and although there is unquestionably a large amount of the material in sight, mining will be attended with the uncertainties which invariably accompany the working of pocket deposits.

(To be Continued.)

THE BARBERTON REEFS, LIMITED.

It will be seen, on reference to our advertisement, that the property of this company is situated on the well-known Sheba Hill, Barberton Gold Fields, South Africa, and consists of six blocks of ground, each containing 12 claims. In all the extent is 72 claims, each being 150 feet by 400 feet. The blocks are located on the second spur of the hills south of the Sheba, and the distance as the crow flies about 800 to 1200 yards from the Sheba quarry, and midway between, and in direct line from Sheba Mines, is the recent new strike of Messrs. Lewis and Marks on Zwartkopje, Synmans Creek, the Pride of Paris blocks being about 400 to 600 yards from the new strike. In a recent report of Mr. Van Bemper (the Government Mine Inspector for Barberton area) this gentleman states that:—"He is personally convinced that, taking into consideration the great extent of already proved payable reefs, the discovery of others may yet be expected. The Pride of Paris property possesses many natural advantages, transport now by the Delagoa Bay Railway in within 5 miles of the mines and very cheap. The drainage and ventilation of the adits and shafts are simple and effective. There is an excellent site for the battery on the creek side of the property, and can conserve large quantities of water. Some thousands of horse-power are also obtainable, either from the Queen's river, 4 miles distant, or Kaap river, 5 or 6 miles. The ground lies within rifle shot of and in a direct line with the Sheba crosscut lodes—a most important and significant fact when it is taken into consideration that another rich strike has been discovered between the property and the Sheba—also on a crosscut of the formation and other strikes are being found all around the property."

A FINE collection of minerals is now on view in the hall of the Scottish Mineral Collection on the upper floor of the west wing of the Museum of Science and Art, the reopening of which took place at the beginning of the present month. For the greater part of the nine months during which this hall has been closed, Professor Heddle, of St. Andrews, has been engaged in laying out and labelling the collection of Scottish minerals lately acquired from him, and which it has been a great part of his lifework to gather together. This collection, partly by gift, and partly by purchase, has now become national property, and finds a permanent resting-place in the Edinburgh Museum. Students will do well to pay this collection a visit.

We understand that the Chairman of the Lillooet, Fraser River, and Cariboo Gold Fields, Limited (Mr. Horne-Payne) has left for Paris, to witness the placing of the new issue of additional capital of £250,000 on the market, and to see the shares officially quoted. The official quotation has, we understand, been granted, and large dealings for money have already taken place, whilst there are considerable commitments for the end of October settlement.

* Published by permission of the director of the United States Geological Survey, and read before the Florida meeting of the American Institute of Mining Engineers.

THE METAL MARKETS.

LONDON METAL MARKET.

THE METAL MARKET, LONDON, SEPTEMBER 20.
Copper.

THE G.M.B. market opened firm at £47 1s. 3d. s.c., and improved a further 1s. 3d., the statistics for the first fortnight with an improvement of about 1500 tons, lending a little stimulus. The firmness was, however, checked by the influence of pig-iron, which fell heavily in consequence of the threatened labour disputes in the shipbuilding industry, and in the absence of active speculative interest, copper gradually went lower, £46 10s. being reached on Wednesday, and £46 3s. 9d. on Thursday. The turnover was fairly good throughout, and on Tuesday and Wednesday quite active, amounting, for the two days, to 2500 tons. From £46 3s. 9d. the value rallied to £46 8s. 9d. on Thursday evening, and to-day, after business at up to £46 12s. 6d. s.c. and £46 12s. 6d. s.c., and £46 18s. 9d. to £47 three months. As to refined sorts there is nothing new to report. Enquiry and business have been on a limited scale, whilst the prices remain at about their former level.

Tin.

The course of this market has been affected similarly to and in harmony with that for copper, whilst special features have been absent. On Monday spot realised £65 10s. and £65 7s. 6d., and three months £65 17s. 6d., and £65 15s. Business was done on Tuesday again at the lower figures named, whilst Wednesday brought a further decline to £63 3s. 9d. s.c. and £65 8s. 9d. three months, Thursday to £64 18s. 9d., and £65 5s. respectively, and Friday to £64 15s. The close is stronger at £64 17s. 6d. to £65 s.c., and £65 2s. 6d. to £65 5s. three months. In the Dutch market the first three days were distinguished by great steadiness, s.c. Billiton remaining at fl. 39 $\frac{1}{2}$ and forward at 39 $\frac{1}{2}$. The quotations on Thursday were fl. 39 $\frac{1}{2}$ and fl. 39 $\frac{1}{2}$ respectively, and this morning's telegram advised fl. 39 for spot and fl. 39 $\frac{1}{2}$ for forward. Banca closes at fl. 39 $\frac{1}{2}$.

Pig-Iron.

As mentioned under the heading of copper, the course of this market has been strongly downwards, owing to anticipations of the trade being disorganized by a shipbuilding strike on the Clyde. From 48s. 4d. s.c. Scotch pigs fell 46s. 9d., rallying subsequently to 47s. 8d., and closing at 47s. 4d. buyers. Hematite has fallen from 50s. 5d. to 49s. 5d., and Middlesbrough from 39s. 4d. to 38s. 5d. The shipments last week were 8355 tons, as against 2263 tons in the same week 1894.

Lead.

is somewhat better again, the provinces evincing more interest in the article, and we close steady at £10 17s. 6d. soft foreign, and £11 to £11 2s. 6d. English.

Spelter

presents no feature of importance. The market keeps quiet, but without loss in value, and the final quotations are £15 7s. 6d. ordinaries, and £15 10s. specials, buyers.

Antimony

closes at £31 10s., without new feature.

Quicksilver

steady at unchanged values (as above).

The following are to-night's (September 20) prices of metals:—

	Copper.	
Tough cake and ingot	50 10 0	51 0 0
Bent selected	51 5 0	51 15 0
Electrolytic Copper	54 0 0	55 0 0
Sheets and sheathing	57 0 0	60 0 0
Flat bottoms	60 0 0	
Chili bars	16 11 3	18 19 9
Good merchantable, spot, & 3 months respectively	16 11 3	18 19 9
Copper tubes, seamless	0 0 7 5	
Alloys.		
BRASS: Wire	0 0 5 5	
Tubes (solid drawn)	0 0 6 6	
Sheets	0 0 6	
PHOSPHOR BRONZE: Alloys II.	73 0 0	
" III. or VII.	81 0 0	
" XI.	83 0 0	
" Vulcan brand A1	78 0 0	
DURO METAL	72 0 0	
BULL'S METAL	73 0 0	
	65 0 0	
Ferrobronze (Vivian's).		
Ingots	per lb.	5 5 4
Ordinary sheets, plates, bolts and bars	0 0 6	6 6
Screw bolts and nuts	0 0 6	6 6
Pump rods, plain	0 0 7	6 6
" finished	0 0 10	6 6
DELTA METAL: No. 4 (per ton)		
Sheets and plates (per lb.)		
" Bars, round, square, flat (per lb.)		
" hexagon (per lb.)		
Tin.		
English, Ingots, f.o.b.	68 0 0	69 0 0
" bars	69 0 0	70 0 0
" refined	70 0 0	71 0 0
Strait's, spot and 3 months respectively	64 16 3	65 3 9
Australian, spot, and three months respectively	65 6 3	66 13 9
Banca, (in Holland)	66 2 6	66 5 0
TIN PLATES: Charcoal, best quality	per box	0 12 0
" ordinary	0 11 0	0 11 6
" Coke, best quality	0 10 3	0 10 6
" ordinary	0 10 3	0 9 9
These prices of tinslates are f.o.b. at Sevres: at Liverpool 6d. per box more.		

PIG, G.M.B., f.o.b., Clyde, spot	2 13 6
" Scotch pig, No. 1 Gartsherrie	2 15 9
" Coltness	2 12 0
" Govan	2 9 6
Hans, Welsh, f.o.b., Wales	4 17 6
Plates	5 17 5
Bars, Staffordshire, at works	5 2 6
Sheets	7 0 0
Plates	6 7 6
Hoops	5 15 0
Ship plates, Middlesbrough	4 17 6

"THE MINING JOURNAL" SHARE LIST.

ABBREVIATIONS AND REFERENCES.—The following are the significations of the abbreviations and references which occur in the Share List:—*Ay.*, Antimony; *As.*, Arsenio; *Bt.*, Blende; *Bx.*, Borax; *C.*, Copper; *D.*, Diamond; *G.*, Gold; *I.*, Iron; *L.*, Lead; *M.*, Manganese; *N.*, Nitrates; *P.*, Phosphates; *Q.*, Quicksilver; *R.*, Ruby; *S.*, Silver; *S-L.*, Silver-lead; *Sul.*, Sulphur; *T.*, Tin; and *Z.*, Zinc. * in the "Amount of Share" column of British Mines signifies that the mine is conducted on "Cost Book" principles; I in the "Head Office" column of African Mines signifies that the address given is not that of the head office, but of a sub, or transfer office; and f, following the names of African Mines, signifies that they are subject to the Limited Liability Law of the South African Republic.

* The following is by far the most complete and comprehensive list of mines, in whose shares business is being currently transacted, published. Additions will be made from time to time as occasion requires. Every effort is made to ensure accuracy, and Secretaries of Companies, Share Dealers, and our readers generally, are cordially invited to co-operate with us to this end, by notifying us of any errors that may at any time occur. We desire it to be understood that, while our Share List will almost invariably be found correct, we do not hold ourselves responsible for any loss or inconvenience that may arise from possible inaccuracies.

BRITISH MINES.

Name	Closing Price, Sept. 23, 1895.	Closing Price, Sept. 13, 1895.	Am't. of Share	Latest Dividend	Called up per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office
Blue Hills ... CT	2/- 4/-	2/- 4/-	2 s.	2/- May, '93	£ 5 19 5/-	5,253	Cornwall	Camborne.
Botallack ... J	—	—	—	—	51 4 6	1,880	Cornwall	St. Just.
Carn Brea ... T	1 1/2 1 1/2	2	■	2/6 Dec., '93	22 8 5	6,000	Cornwall	Carn Brea.
Cook's Kitchen .. T	—	—	—	—	35 15 10	4,900	Cornwall	Camborne.
Devon Gwnto. CA	par 1/4 pm	par 1/4 pm.	1 0	—	0 12 6	25,000	Tavistock	8, Finsbury circus.
Devon Gt Cons. CA	1/2 1/2	1 1/2 1 1/2	5 0	1/6 May '95	2 0 0	10,240	Devon	5, Finsbury circus.
Dolcoath ... J	18/ 20/	18/ 20/	1 0	—	1 0 0	—	Cornwall	Camborne.
Do. ...	5/6 6/6	6/6 6/6	1 0	—	part paid	81,856	Cornwall	Camborne.
Drakewalls CTM	1 1/2 2/-	2/3 2/9	5/-	—	0 2 0	—	Cornwall	Camborne House.
East Halkyn ...	20/- 25/-	20/- 25/-	1 0	—	0 12 6	12,000	Flintshire	67, Lord St., Liverpool.
East Pool ... AT	4 4 1/2	4 4 1/2	4 1/2	1/6 Sept., '94	0 9 9	6,400	Cornwall	Hillock.
Gawton ... CA	—	—	2 10	—	2 7 3	12,000	Devon	20, Great St. Helens.
Great Laxey ... L	1 1/2 2	1 1/2 2	4 0	5/- Apr., '92	0 15 0	15,000	I. of Man	Douglas, Isle of Man.
Green Hurth ... L	1/6	1/6	1/6	—	0 19 0	32,000	Umberville	Newcastle.
Halkyn ... L	9 10	9 10	1 0	2/- June, '95	1 0 0	10,000	Flintshire	Chester.
Do. Dis. Min. Drain	10 11	10 11	10 0	5 1/2 Aug., '95	10 0 0	10,000	Flintshire	CornEx.Cmb. Chester.
Isle of Man ... L	3 1/2 4 1/2	3 1/2 4 1/2	5 0	2/- —	5 0 0	11,000	I. of Man	Chester.
Killifreth ... T	10/ 11	11/ 12/	■	1/6 Nov., '94	5 11 6	6,000	Cornwall	Truro.
Leadhills ... L	7 1/2 11/2	7 1/2 11/2	6 0	3/- Sep., '92	6 0 0	20,000	Lanarksh.	30, Finsbury-circus.
Llanarmon ...	par	par	1 0	—	1 0 0	21,990	Denbigh	5, Werburgh Chambers
Llanarmon ...	par	par	1 0	—	0 15 0	3,790	Flintshire	Chester.
Levant ... CT	4 1/2 4 1/2	4 1/2 5	4 1/2 5	4/- Nov., '94	11 9 6	2,500	Cornwall	Penzance.
Lovell ... T	—	—	—	1/3 Nov., '94	11 16 7	7,165	3, Gl. Queen-st., S.W.	Wendron.
Miners ... L	—	—	5 0	5/6 Mar., '90	5 0 0	9,000	Denbigh	3, Gl. Queen-st., S.W.
Northfield Ind. LZ	1/8	1/8	1/8	6 1/2 Feb., '91	0 18 0	48,875	I. of Man	I. of Man.
New Cooks Kitn. TC	—	—	—	—	10 18 3	4,920	Cornwall	Newcastle-on-Tyne.
New Minera ...	—	—	1 0	1/- Oct., '92	2 10 0	30,000	N. Wales.	8, Queen-street-place.
North Hendre ...	—	—	2 1/2	8 p.c year 82	2 10 0	11,854	Flintshire	11, Nwg. st., Chstr.
Parc ... LZ	—	—	1 0	1/- Mar., '90	1 0 0	5,000	Flintshire	Billiter sq. building.
Phoenix United LZ	—	—	7 4 6	10,665	7 4 6	10,665	Cornwall	Liskeard.
Poldreux ... T	5 1/2 7	17/6 22/6	■	—	1 5 0	18,000	Agnes, Cl.	7, Walbrook.
Rhosneigr ... L	par	par	1 0	10 p.c Sept. 91	1 0 0	1,000	Flintshire	CornEx.Cmb.Chester.
Rhosneigr ... L	par	par	1 0	—	0 19 0	18,000	Flintshire	CornEx.Cmb.Chester.
So. Condorow TC	2/ 3/	2/ 3/	■	3/6 Apr., '93	7 17 6	8,123	Cornwall	20, Great St. Helens.
South Crofty TA	3 1/2 4 1/2	3 1/2 4 1/2	■	—	17 10 6	5,769	Cornwall	Pool, Cornwall.
S. Fraizes Untd. T	1 1/2	1 1/2	1 1/2	—	2 7 6	6,000	Cornwall	Redruth.
South Halkyn ...	par	par	1 0	—	1 0 0	10,000	Flintshire	8, Werburgh Chambers
South Halkyn ...	par	par	1 0	—	0 7 0	30,000	Flintshire	8, Werburgh Chambers
Talacre ...	par	par	1 0	—	0 15 0	20,000	Flintshire	84, Forgate st., Chstr.
Tincroft ... T	7 7 1/2	7 7 1/2	7 1/2	2/- Aug., '94	15 7 6	6,000	Cornwall	Carn Brea.
Weardale ... L	8/9	8/9	4 0	1/3 Oct., '90	1 10 0	50,000	Durham	3, Lombard-court.
West Frances ... T	1 1/2	1 1/2	1 1/2	2/6 May, '92	17 1 7	6,144	Cornwall	Camborne.
West Kitty ... T	4 1/2	4 1/2	4 1/2	2/3 Dec., '94	1 2 0	2,000	Cornwall	37, Walbrook.
Wheat Agra ... T	1/2 1/2	1/2 1/2	1/2 1/2	2/6 Aug., '92	23 12 2	6,000	Cornwall	Redruth.
Wheat Basket ... TC	2 1/2 3	2 1/2 3	2 1/2 3	10/- Apr., '92	12 3 0	6,144	Cornwall	7, Union-court, E.C.
Wheat Friendly ... T	1/ 1/6	1/ 1/6	1/ 1/6	—	0 12 0	10,000	Cornwall	110, Cannon-st., E.C.
Wheat Granville T	13 13 1/2	13 13 1/2	13 13 1/2	3/- July, '95	18 2 20	8,000	Cornwall	7, Union-court, E.C.
Wheat Kitty ... T	8/ 9/	8/ 9/	2/3	3/- Mar., '92	4 5 6	5,590	Cornwall	Truro.
Wheat Metal & F.T	—	—	—	—	0 13 9	10,784	Cornwall	14, Broad-street.

EUROPEAN MINES.

Name	par	par	1 0	10 p.c Sept. 91	1 0 0	1,000	Flintshire	CornEx.Cmb.Chester.
Alamillos ... L	1 1/2	1 1/2	1 1/2	1/6 Sept., '95	2 0 0	35,000	Spain	5, Queen-street-place.
Avila ... Q	0 1/2	0 1/2	1 0	1/- May '93	1 0 0	61,584	Servia	4, Tokenhouse Yard.
Consett Ore ...	6	6	1 0	5/- July 94	1 0 0	55,200	Spain	19, Grey-st., Newcastle.
English Cr. Spelter ...	3 1/2 3	3 1/2 3	1 0	2 1/2% Aug., '94	1 0 0	84,000	Lombardy	9, Queen-street-place.
Fortuna ... L	1 1/2	1 1/2	2 0	-6 Sept., '95	1 0 0	25,000	Spain	6, Queen-street-place.
Libilola ... C	3 1/2 3 1/2	3 1/2 3 1/2	5 0	4/6 Apr., '95	5 0 0	80,400	Italy	Dashwood Ho., E.C.
Linares ... L	5 1/2	5 1/2	5 1/2	7/- Sept., '95	3 0 0	14,998	Spain	5, Queen-street-place.
Mason & Barry ... C	2 1/2 3	2 1/2 3	5 0	2/- May, '94	5 0 0	185,172	Portugal	87, Cannon-street.
Pestarena ... G	6/6 7/6	6/6 7/6	3 0	—	3 0 0	67,800	Italy	6-7, Queen-street-pl.
Pontigbaud ... SL	—	—	20 0	11/6 Dec., '94	20 0 0	14,000	Coueran...	6-7, Queen-street-pl.
Rio Tinto ... C	17 1/2 18	18 18 1/2	10 0	5 1/2 July, '95	10 0 0	325,000	Spain	30, St. Swithin's-lane.
Do. (Mort. Bonds)	—	—	100 0	5 1/2 July, '95	100 0	289,740	Spain	30, St. Swithin's-lane.
Do. (2nd do.)	—	—	100 0	5 1/2 July, '95	100 0	284,360	Spain	30, St. Swithin's-lane.
Do. (3rd do.)	—	—	100 0	5 p.c. Apr. 95	100 0	257,700	Spain	30, St. Swithin's-lane.
Hipano ... Q	—	—	1 0	—	0 19 0	95,000	Servia	120, Bishopsgate-st. W.
Tharais ... C Sul	5 5 1/2	5 5 1/2	2 0	4/- May, '95	2 0 0	625,000	Spain	2/3, Glasgow.
West Prus Pre. pref.	—	—	10 0	8 1/2 July, '95	10 0 0	355	Germany	Walbrook Ho., E.C.
West Prussian Pre.	—	—	10 0	8 1/2 July, '95	10 0 0	5,450	Germany	Walbrook Ho., E.C.
West Prussian Or.	—	—	10 0	8 1/2 July, '95	10 0 0	14,050	Germany	Walbrook Ho., E.C.
Wohlfahrt ... L	—	—	1 0	3 1/2 Dec., '94	1 0 0	99,634	Prussia	17, Victoria-st., S.W.
Wohlfahrt ... L	—	—	1 0	3 1/2 Dec., '94	0 10 0	9,000	Prussia	17, Victoria-st., S.W.

NORTH AMERICAN MINES.

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"THE MINING JOURNAL" SHARE LIST—(Continued)

SOUTH AND CENTRAL AMERICAN MINES.

Name.	Closing Price, Sept. 20, 1895	Closing Price, Sept. 13, 1895.	Amt. of Share	Latest Dividend.	Called up Per Share.	Amount of Stock or No. of Shares Issued.	Situation of Mine.	Head Office.
Anglo-Chilian P.N.	9 9/16	9 9/16	10 0	13/11-5 Jun '95	10 0	35,000	Antofagast.	123, Bishopsgt-st. W.
Do. 6% Royal M.B.	107 10/9	107 10/9	100 0	6 1/2 July '95	100 0	210,000	Antofagast.	123, Bishopsgt-st. W.
Auto. (Prof.) G.S.	—	—	—	—	—	—	Colombia	124, Gresham Ho.
Autogold.....G	1/3 1/9	1/3 1/9	2/6	—	1 0	42,453	Colombia	124, Gresham Ho.
Caratol.....G	—	—	—	—	—	—	Venezuela	57, Moorgate-st. E.C.
Ovillano.....S	—	—	—	—	—	—	Peru	52, Leadenhall street
Colon.....G	—	—	—	—	—	—	Colombia	5, Calthall-bdg., E.C.
Colorado Min. N.	13 1/4	13 1/4	1/4 1/4	5/5	4/- May '95	5 000	Chili	17, King-st., Liverp'l
Colombian Hy....G	1/2 9/16	1/2 9/16	1/2 1/2	2 0	10/- Aug. '94	20 000	Colombia	Cludad Bolivar.
Coopiso.....G	—	—	—	—	—	—	Colombia	10, Bloomfield-stre-t
Darise "A".....G	23/4 3	23/4 3	2 1/2	2 0	1/4 May '95	1 000	Chili	Dashwood House, E.C.
Do. "B".....G	3 3/4 4	3 3/4 4	2 1/2	1 0	—	—	Colombia	Manchester.
Do. Pedro.....G	4/5 5/	4/5 5/	4 1/2	1 0	—	—	Colombia	24-5, Davon's, Co.E.C.
El Callao.....G	5/6 7/6	5/6 7/6	5 000	9 1/2 Feb. '94	5 000	267,600	Brazil	G. F. of Lydenburg
Frontino & B....G	13 1/4 15	13 1/4 15	1 1/2 1/2	1 0	1/- Aug. '95	1 000	Colombia	G. F. of Mashond.
Glenrock.....G	1/2 9/16	1/2 9/16	2 1/2	1 0	—	—	Colombia	Ginberg
Gravel.....G	3/8 4/8	4/8 5/8	1 1/2	1 0	—	—	Colombia	Glenairn
Gudapple.....GS	3/5 5/5	3/5 5/5	1 0	—	—	—	Colombia	Gold Coast Dev'l.
Huancahu.....S	—	—	—	—	—	—	Colombia	Gold Estates T...G
Javall.....G	—	—	5 0	4/- Sept. '94	5 000	320,000	Bolivia	Gld. Fis. Deep...G
Julia Taital.....N	3/4 3/6	3/4 3/6	1 0	3/2 Z '91	0 2 0	105,234	Nicaragua	G. F. of Lydenburg
Lagunas.....A	4 4/6	4 4/6	4 1/2 1/2	5 0	15 p.c. Dec. '94	5 000	Chili	3, Gracechurch-st.
Lautaro.....N	6 6/6	6 6/6	6 1/2 1/2	5 0	7/6 June '95	5 000	Chili	6, Bishopsgt-st. W.
Liverpool.....G	10 11	10 11	5 000	15/- May '95	5 000	110,000	Chili	70, Gracechurch st.
Loma.....G	1 1/2 2/	1 1/2 2/	3 000	3/4 3 Nov. '94	5 000	300,000	Colombia	5, Calthall-building.
London Nit. (Prof.)	3/4 4	3/4 4	5 000	8 1/2 Nov. '94	5 000	10,000	Chili	Jumpers.....G
Mataca.....N	1/3 1/9	1/3 1/9	2/3 2/	1 0	1/- April '94	1 000	Colombia	9, Gracechurch-st.
New Tamarugal N.	3/4 3/6	3/4 3/6	1 10	1s. Dec. '94	1 10	200,000	Chili	11, Old Broad-st. E.C.
Do. 8% Cum Pref.	7/8 8/8	7/8 8/8	1 10	8 p.c. Feb. '95	1 10	130,000	Chili	10, Old Broad-st. E.C.
Do. 6 p.c. Cum	77 80	80 83	100 0	6 p.c. Aug. '95	100 0	220,000	Chili	50, Lime-street, E.C.
Orita.....G	1/3 1/9	1/3 1/9	1 0	1/- Aug. '95	1 000	80,000	Colombia	52, Lime-street, E.C.
Ouro Preto.....G	—	—	—	—	—	—	Colombia	10, Bloomfield-street.
Pac. & Zapampa N.	23/4 3	23/4 3	5 0	4/- May '95	5 000	72,000	Peru	11, Old Broad-st. E.C.
Primitive.....N	1 1/2 1/2	1 1/2 1/2	6 1/2 1/2	5 0	10/- Oct. '94	5 000	Peru	Tarapaca
Quichuado.....C	3/4 3/6	3/4 3/6	3 000	5 1/2 Mar. '95	3 000	40,000	Peru	50, Lime-street, E.C.
Rosario (5% Deb.)	108 10/9	108 10/9	100 0	5 1/2 April '95	100 0	247,000	Peru	Koffyfontein...D
Do. Huaral Deb Serp.	108 10/9	108 10/9	100 0	5 1/2 July '95	100 0	220,000	Peru	Langlaagte Est. G
St. John del Rey G	13 1/2 13	13 1/2 13	1 1/2 1/2	1 0	10 1/2 June '95	1 000	Peru	Do. Royal
St. John Donato.....N	1 2	1 2	2 1/2	1 0	2 1/2 May '95	1 000	Peru	Lionsdale
St. Jorge.....N	5 5/6	5 5/6	5 000	12 1/2 June '95	5 000	32,000	Peru	Lisbon-Berlyn...G
San Pablo.....N	2 2/4	2 2/4	6 000	2 1/2 Nov. '94	6 000	75,000	Peru	London & S. A. Ex.
Santa Barbara.....G	—	—	—	—	—	—	Peru	Lower Roodepoort
Santa Elena.....N	3/4 3/6	3/4 3/6	5 000	5 1/2 Oct. '94	5 000	60,000	Peru	Luipards Vlei Est
Santa Lucia.....N	2 1/2 3/4	2 1/2 3/4	5 000	5 1/2 Oct. '94	5 000	22,000	Peru	Main Reef (New) G
San Sebastian.....N	1 1/2 2	1 1/2 2	5 000	10 1/2 May '95	5 000	20,000	Peru	Mashonald Agency
Santo Prof.G	—	—	—	—	—	—	Peru	Do. Central
Santo Ord.G	—	—	—	—	—	—	Peru	Mashiess Kessl.
Tolima "A".....S	7 1/2 8 1/2	7 1/2 8 1/2	5 000	10 1/2 July '95	5 000	10,000	Peru	Matabeleld G. R'.
Do. B.G	6 1/2 6 1/2	6 1/2 6 1/2	5 000	10 1/2 July '95	5 000	14,000	Peru	May Con. (New) G
Do. C. & Almira ...	1/6 2/6	1/6 2/6	5 000	10 1/2 July '95	5 000	6,000	Peru	Meirong (N) G
Do. Pref.G	2/2 2/6	3/2 3/6	—	—	—	200,000	Peru	Meyer & Ohari..G
West Indian.....G	—	—	1/	—	—	1 0 10	Peru	Middle Viei
						1,725,585	Peru	Modderfontein...G
							Peru	Montrose.....G
							Peru	Moodies G. & E. G.
							Peru	Mozambique.....G
							Peru	Singlo.Dm

INDIAN AND ASIATIC MINES.

Asia Minor Pref. N.	—	—	10/10/	—	0 10 0	42,430	Asia Minr	2, Metal Ex. Bldgs.
Do. Ord.G	—	—	—	—	—	—	Asia Minr	2, Metal Ex. Bldgs.
Baignat: Mysore G	3/16 M	3/10 10/	1 0	—	0 19 0	159,945	India	5-7, Queen-street-p.l.
Burma Ruby.....R	23/8 24/8	24/8 25/8	1 0	—	0 18 0	229,551	India	Suffolk House, E.C.
Champion Reefs...G	47 1/2 49 1/2	46 1/2 49 1/2	1 0	4/- Sept. '95	1 0 0	200,000	India	5-7, Queen-street-p.l.
Col Central.....G	1 1/2 1/2	1 1/2 1/2	1 0	—	—	—	India	5-7, Queen-street-p.l.
Commander.....G	1/2 1/2	1/2 1/2	1 0	—	0 17 0	200,000	India	5-7, Queen-street-p.l.
Gold Pdls:Mysore G	18/6 19/6	18/6 19/6	1 0	1/- July '95	1 0 0	275,000	India	5-7, Queen-street-p.l.
Hyderabad Dec....G	5/6 5/6	5/6 5/6	5 0	—	5 0 0	116,000	Deccan	6-7, Queen-street-p.l.
Kempinkite GdPd	2/3 2/9	2/3 2/9	5/5	—	0 3 0	750,000	India	6-7, Queen-st.-place.
Mewari.....G	2 1/2 2 1/2	2 1/2 2 1/2	1 0	2/8 June '95	1 0 0	248,354	India	6-7, Queen-street-p.l.
W. Barnhill.....G	2/3 3/3	2/3 3/3	1 0	—	0 18 0	100,007	India	2, East India Avenue
Mysore Reefs.....G	13/6 13/6	13/6 13/6	1 0	—	—	—	India	6-7, Queen-street-p.l.
Mysore West (N) G	3/4 3/6	3/4 3/6	1 0	4/- Aug. '95	1 0 0	107,011	India	6-7, Queen-street-p.l.
Mysore Wynand G	11/16 12/16	11/16 12/16	1 0	2/4 Aug. '95	0 5 0	12,989	India	6-7, Queen-street-p.l.
Myso Reefs.....G	2/3 2/9	2/3 2/9	10/	10 p.c. Jan. '95	1 0 0	250,000	India	6-7, Queen-street-p.l.
Pahang Kabang T	3/6 3/6	3/6 3/6	1 0	—	1 0 0	200,000	Malay Pn.	4, Jeffrey's sq. E.C.
Strait Developmt.	13/6 15/6	13/6 15/6	1 0	—	0 19 0	184,292	Pahang	15, Copthall Avenue
Ternakonda.....G	1/6 2/6	1/6 2/6	4/	—	0 2 0	187,491	Mysore	5-7, Queen-street-p.l.

AFRICAN MINES.

Abercon Reef ...G	1/6 1/9	1/6 1/9	5/5	—	0 4 0	—	Millwood	16, Tokenhouse Yard

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Reports from the Mines—Continued.

BATHURST GOLD MINES.—Trunkey, July 31. The following is taken from the report of the mine manager, just to hand: The property is situated about one mile nearly due north from the township of Trunkey, and consists of three blocks of ground respectively 8, 3, and 2 acres. The Minnie and American Star have apparently been worked many years ago, the former only in places at no great depth, the vein being small and isolated and generally poor. The latter, American Star, has been worked continuously along the line to a depth of 70 feet or water level, the vein also being small and isolated but of good payable quality. The strike or dip of the stone is southerly, underlying west. Our main seat of operations will be the western line (see plan). During the past twelve months I have devoted almost all my work and explorations along this portion of the property, and I find every reason to confirm my original opinion of its value. The line of quartz that forms the eastern boundary of this channel of country will evidently form the backbone of the main reef below this, taking its natural underlie to the west, will cut and take down all those feeders and shoots striking in from the east, and form into a main body. In this concentrated form I have no doubt that rich deposits of gold will be met with. As I have previously mentioned, I cannot do anything towards attaining to these levels or opening them up without doing a considerable amount of dead work. The crosscut and sinking of the main shaft I propose to get done by contract labour. At the same time I propose to clean out that shaft on American Star line, and work it, if payable, as a means of assistance to the funds of the company. The foregoing works will necessitate a regular monthly remittance of not less than £150 until all is completed. This sum will be bare enough, and will not allow of much else beyond the work mentioned.—Machinery. Our present winding-plant will do all that is necessary until we have the ground opened up, and in the event of striking and developing a good payable lode, we can, in the meantime, utilise our leased battery until such time as our own is erected. The capacity of plant and class of appliances will be solely determined by the character, quantity, and quality of stuff to be treated. So far I have found the gold very free and easily extracted except in the case of the last crushing from the Giant at 100 feet level. The occurrence of quantities of arsenical pyrites at that level would certainly indicate the probability of meeting heavy deposits in the deeper ground. In that case our course will be clear enough—viz., an efficient method of concentrating, and subsequent calcining and chlorination, or by the cyanide process. I am well conversant with all practical methods of gold extraction at the same time should be glad to confer with Dr. Robertson on questions of this nature.—Purchasing machinery. This could be done to far greater advantage in this country, as there are always large quantities of good second-hand plants to be got at less than half their original cost.—W. R. Easdown.

CHIAPAS.—Mine report for fortnight ending August 15: Providencia Aver, rise No. 2, driven 15 feet, total 63 feet. Rising in contact rock on footwall of ore body. Providencia Aver drift driven 14 feet, total 364 feet. No change, only traces of ore. Providencia Aver, crosscut west, driven 8 feet, total 26 feet. No change. Santa Fé Hill No. 3 driven 5 feet, total 109 feet 6 inches. Cut crevices. Pine contact driven 13 feet, total 50 feet. No change. Sylva contact driven 23 feet, total 70 feet. No change; cut dyke making from west side across into main body of igneous rock. Taylor main extension driven 2 feet, total 651 feet. No change. San Juan crosscut driven 12 feet, total 62 feet. Ore in bottom of drift continues, face, too, improved in copper.—Providencia east, No. 1. Recommended to cut, it is hoped, same run of ore found in San Juan crosscut.—Extraction. Santa Fé hill. Extracted 31 tons. Very good quality.—Santa Fé stopes. Extracted 130 tons. Average quality.—Taylor No. 3. Extracted 60 tons. Average quality.—Old Provencia. Extracted 322 tons. Very good in quality.

CARATAL.—The superintendent writes under date August 26: I have had to send some parts of the pump to El Callao workshops for repair, and, to save time, have the loan of lathe from them. The pump will be finished to-morrow, when I will get a good run of the mill, as I have enough ore for 40 stamps waiting, and have this number fit for work. This will give me a good return for next bullion mail, and I hope the mail following will be better still.

CHAFFERS.—Mr. F. Bowes-Scott reports: On the 27th inst. the crosscut in 123 feet from the shaft, and we have just intersected a thick band of reef matter just about the point at which we anticipated cutting the Horseshoe lode. If after driving some 30 feet further we cut nothing else, I propose sinking a winze on the reef matter referred to in order to prove whether it is connected with the lode we are looking for. I cannot help thinking that it must be, and considering that the Chaffers is on much lower ground than the point where we are sinking our water shaft on the Horseshoe lode, it would not be surprising to find the cap of the lode in the Chaffers block 50 or 60 feet below the surface.—Chaffers shaft. Sunk 6 feet 6 inches, total depth 83 feet. The ground is very hard and progress proportionally slow.—Crosscut. Drove 32 feet, total length 142 feet. We have now gone some 20 feet beyond the point we anticipated cutting the Horseshoe reef, and I, therefore, intend stopping the crosscut for the present, and sinking a winze on the large leader intersected, to prove if it is connected with the reef.

D'ARCY ESTATES.—Report dated August 10: Main shaft. Total depth 484 feet, progress for week 6 feet, together with timbering 28 feet.

DON PEDRO.—Mine manager's half-monthly report, August 15: During the month operations have been carried on in sinking the winze from the 50 to the 60, and to date we have completed 4 fathoms. The ground passed through was very much crushed, owing to the soft belt of ground met with in driving the 60 fathom level in April, 1893. The line of gold met with at this place is also crushed and cannot be extracted as boxwork, but it is taken away with general work. We are pushing ahead with this as fast as possible to lay open this section for stoping. East of the winze at the 50 we have a force repairing the main thoroughfare to resume the eastern ground. We have also resumed the drivage south from the 50 driven to prove the No. 6 shoot of lode. In crossing the old stopes we have met with lodes over the old stope timbers, which we believe is part of the formation worked on in March, 1893, in which a rich line of gold was met with. At present we are driving south, and as soon as we have opened out sufficiently, more force will be employed at this part of the mine in order to open stopes west on a fair average lode. We shall also drive east from this place to intersect the line of gold standing over the 50.—Stopes north of 50 on Canoa shoot. The formation here is very large, but very poor; in fact, will not pay for excavating, therefore we have abandoned this place. We have also driven north beyond any formation north of the Canoa shoot, but nothing has been met with, therefore we know by practical knowledge we have nothing more in this part of the mine.—Hilke's level. We have a force driving south of east on a very fair quality of lode, and if this continues, we shall lay open a great deal of stoping ground in this part of the mine.—Mine drainage. The 70 fathom crosscut has been advanced 9 feet since starting. The ground is somewhat hard, but good progress is being made. The drivage is very wet, and the 60 water is decreasing as the crosscut is advanced.—Shaft repairs, and all running work, have been attended to as usual.

FRONTINO AND BOLIVIA.—Mr. Estice's reports on the mines, La Salada, July 23:—El Silencio. The shaft sinking has been carried on fairly well during month. The lode north and south in No. 7 level is good. The north end is about 4 feet thick, and the

south end about 2½ feet thick, both in good mineral. No. 6 end south is also in good mineral and about 4 feet in thickness, but this level north is in mixed formation, and does not seem to change since last reported. No. 5 south end is in a lode 2½ feet thick, of very friable quartz; this end north carries hard seams of quartz mixed with country rock. For the present I have suspended this driving until we are farther advanced in No. 7 level. No. 4 level south is in a mineral 6 feet in thickness, and very mixed with granite. The Bolivia crosscut has now changed into hard ground and does not require timbers.—La Salada. The sinking of the shaft has been retarded on account of the scarcity of water for the pumping wheel; however, 7 feet has been sunk, and appearances show that we should soon be approaching the lode. At present there is a considerable quantity of water issuing from the ends, which in all probability comes from the stopes above. We have all the rise in No. 2 level south into the stopes which were formerly described as the stopes below No. 6 level. The rise in the north is suspended temporarily to push ahead the end. The manto or flat lode has very much improved, as has also the La Salada main lode advancing southward. All the ore now being crushed is extracted from these two ends, and on the whole is producing about 1½ ounce stuff,—Cordoba. In the No. 8 crosscut we have met with another mineral, but very little advance has been made on it yet. The south end has slightly improved, but the north drivage is still in a very disordered condition. In the Rosario section south above No. 7 level there is nothing to call attention.—Tigrito. The No. 6 level west has been pushed on fairly well during the month, and the rock has slightly improved. We have started a rise above this level to open to No. 5 for ventilation, but I rather expect this work will be delaying us for some time as it will require careful timbering. The level east is still in very poor ground and there are scarcely any signs of a lode; however, there is very little change to note since last reported.—Marmajito: The lode in the east end has improved slightly, and the water has increased considerably. The stopes in the back of this level are rather disordered, but the "diarios" from the mills are fairly good. We have had considerable trouble on account of the scarcity of water, and most of the time only eight stamps have been running. It may be considered, however, that about the middle of next month the wet season will set in, in which case this mill and Marmajito can be kept running with a full supply of water on full time. Tias water-course is completed, and nothing now remains but to break through the tunnel; this I hope will be completed in about six weeks, but the ground has changed remarkably in the last few feet, and we are obliged to pay a heavy price for the drivage, besides having trouble with the contractors. The Poconé ditch is being repaired and widened from the San Antonio aqueduct to María Alegria; this work, I think, should be finished about the same time as the tunnel will be completed, afterwards there will be a few minor repairs from María Alegria to La Salada. The work has been a most expensive and tedious one, but I thought it would be best to take advantage of the dry season and make a thoroughly good job whilst at it.

GELDENHUIS ESTATE AND GOLD.—The following is a summary of operations for July:—Quartz milled, 15,735 tons of 200 lbs.; quartz milled (120 heads), 15,681 tons of 2000 lbs.; yielding smelted gold, 5520.95 ounces, valued at £19,184 15s.; concentrates sold (say), 211.75 ounces, valued at £510 18s. 9d.; tailings treated, 9751 tons, 2268.55 ounces, valued at £6695 16s.; slags, 170.12 ounces, valued at £513 13s. 9d.; total, 8,161.37 ounces, valued at £26,905 3s. 6d.—Cost, £11,930 17s. 11d.; mining and hauling, 9s. 4d.; transport, 4s. 5d.; milling, 2s. 10s. 5d.; general maintenance, 2s. 2d.; total, 14s. 10d.; charges, 4s. 25d.; total, 15s. 2d.; expended on mine development, 2s. 11s. 5d., £2324 0s. 5d.; cost of treating tailings, 2s. 7s. 7d., £1288 16s. 3d.; total, 20s. 9s. 5d.—£15,543 14s. 7d. Profit for the month, £11,361 8s. 11d.—Capital account. Expended on machinery, new shafts, &c., £4776 6s. 1d. Number of feet driven and sunk during month, 703½ feet. The ore developed for the month amounted to 7103 tons.

LA YESCA.—The mine manager reports under date 28th ult. as follows:—San Miguel, lode No. 1. Drive 51 metre, total length 7.75 metres. Walls continue well defined, with spots and streaks of quartz in breast. No difficulty in following the fissure.—Lode No. 2. Drive 4.55 metres, total length 19.85 metres. As cross channel previously referred to is at an acute angle with lode, it is not as yet crossed. Has developed a streak of slatish rock with green specks, then 6 inches of pure white sugar quartz, and disintegrated quartz stained with green.—Crosscut, lode No. 2. Drive 70 metre, total length 16.50 metres. Cross channel appears in foot wall of extension of No. 1, where it is well defined. Crossing No. 2, it appears again in working tunnel near the end, and seems to be the line dividing two dissimilar formations. To the east, soft limestone; to the west, hard rock, with the appearance of trap, gradually changing to the conditions noted in breast of crosscut, which indicates, not only a gold formation, but also proximity to the vein.—El Progreso. Same conditions prevail as previously reported, except that sinking was commenced on 26th instant. Output for last two weeks 35 tons. All the low grade ore which was on the dump has been sent to the mill.—Mill. Commenced running on 5th inst. Eleven days' grinding, 12 hours each day. Total, 69 tons. Assay value 29½ ounces per ton (low grade). Yield 1265 ounces, equal nearly 62½ per cent. Reconcentration of tailings from blanket tables, with vanning plaque, gave 432 ounces concentrates. In actual work a concentration to (say) 300 ounces value, will probably be advisable, as giving larger quantity. Blanket concentrates are piled up for future treatment. Considering the character of the accumulation of extremely low grade ore, which now has been all worked in the mill, I consider the percentage of extraction very good. In future runs of the mill a larger product may be looked for. I am preparing for the erection of "Planillas," or hand concentrators, for the reduction of blanket concentrates. All other work being pushed forward energetically.

LION (Mozambique).—Report from the superintendent engineer for month of July: Drive No. 1 total length 365 feet. Measurement of crosscut from this drive for the month 40 feet; total measurement 76 feet. Drive No. 2 measurement for the month 6 feet; total measurement 278 feet. The forebreast here is still very hard, but I am anticipating a change. I shall be greatly mistaken if we do not strike something rich here soon, or I would have started crosscutting to the reef.—Drive No. 3. I have commenced a prospecting drive farther north than Drive No. 1, and about 50 feet from the crest of the hill, which I anticipate will strike the north and main reefs; if they make down, and the amount of prospecting work done on the outcrop of these reefs is the best evidence that they do. Both these reefs pass well on their outcrops. I have not the least fear but that we shall strike these reefs in No. 3 drive. (N.B.—Since the above was written a cablegram has been received, namely, "Struck rich body of ore new drive.")

MOUNT ZEEHAN (TASMANIA).—Manager reports for week ending August 6: Silver Queen section, No. 8 lode. Main shaft sunk 4 feet 6 inches, total below No. 1 level 50 feet. Started to drive for the lode.—No. 1 level north. Started to sink winze. Lode so far looks favourable. Mill has been running regularly during the week, but no clean-up has been made.—Tributes. G tributaries sampled 19 tons seconds raised last week, realising £190, and 18 tons first raised this week, realising £225, making a total for the fortnight of £454, and netting to ourselves £91.—E tribute. The galena met with at 40 feet level is improving, and is now showing 6 inches to 9 inches wide. A specimen assayed 80 per cent. lead and 125 ounces silver per ton.

NEW QUEEN.—The following fortnightly report has been received from the mine, dated Charters Towers, August 3:—I beg to submit to you my report on the work done in your mine during the past fortnight. No. 2 south level. Stoping has been continued over this level, the reef keeping about the same as last fortnight, about 4 inches, and the ground is hard.—No. 4 south level footwall. This level has been extended a further distance of 5 feet, making it 169 feet from junction of the hanging and footwall reefs. The reef is

more broken up than usual in the end of level. Stoping is being carried on over and under the level on a reef varying from 3 to 9 inches. A winze has been started under this level with the object of proving the reef to the north-west, and will also be the means of communication with No. 2 formation, which will effect a considerable saving in labour. The estimated depth of this winze will be about 140 feet on the present grade.—No. 5a south level. Stoping has been continued over this level, the reef averaging about 9 inches. —No. 1 underlie. Northern level. Stoping is being carried on over this level. The reef is very much broken up through the formation and requires a lot of picking.—No. 4 formation. No. 3 north level has been extended a further distance of 15 feet, making it 92 feet from underlie shaft. The reef in the end of the level averages 9 inches. Very little stoping has been done during the fortnight.—Straight shaft. The straight shaft has been sunk a further depth of 20 feet, making 91 feet from No. 4 formation and 1094 feet from surface. The ground in the bottom is very hard and does not shoot well. We have also timbered 60 feet, and the shaft is now timbered, &c., within 21 feet of the bottom. Satisfactory progress is being made considering the working of the two formations and the insufficiency of air power.—Quantity of quartz raised during fortnight, No. 2 south level 43 trucks, No. 4 south level footwall 205 trucks, No. 5a south level footwall 33 trucks, No. 1a underlie northern level 58 trucks, No. 4 formation 41 trucks, total 377 trucks.—(Signed) W. Henderson.—P.S.—The formation has been built for the new compressor according to plan received.

NEW KLEINFONTEIN.—The directors submit the following summary of operations for July:—Mining and milling. Quartz mined, 6113 tons of 2000 lbs.; quartz milled (65 heads, van 30 days), 6113 tons of 2000 lbs.; yielded smelted gold, 2138 ounces 2 dwt. (average per ton 6 995 dwt.), realised £7750 12s. 5d.—Cost, Mining, hauling, and development, 13s. 10d.; per ton; crushing, sorting, and trammimg, 11s. 5d. per ton; milling, 3s. 0d.; per ton; maintenance, 10s. 6d.; per ton; charges, 1s. 5d.; per ton; 6113 tons at 20s. 1s. 4d. equals £6165 13s. 3d.—Cyanide treatment. Tailings treated, 4980 tons of 2000 lbs.; yielding smelted gold, 680 ounces 4 dwt. (average per ton 2 73 dwt.), realised £1836 1s. 2d. equals £9,586 1s. 7d.—Cost, 4980 tons at 3s. 7s. 1d. per ton equals £305 1s. 10d.—£7069 1s. 1d. Profit for the month, £2517 0s. 6d.—Capital account. Expended on permanent mine, £979 6s. 7d.; machinery and plant, £2599 9s. 8d.; buildings, £766 6s. 9d.; live stock and wagons, £29; furniture, £66 8s. 6d. = £4434 11s. 6d.—Mine. Total ore reserves on July 31, 65,598 tons.—Development. No. of feet driven and sunk 665, against 532 in June. No. of tons developed 8723, against 7501 in June. The new main incline shaft (eastern section) will be completed to 2nd level during August. The improvement of this shaft is going on as quickly as possible. The improvement in the ore developed in the western section of the mine is being maintained. Your board have decided to increase your milling and cyaniding plant to 130 stamps instead of 105 as originally intended, this in view of the progressive manner in which your mine is being opened up. This will somewhat delay the completion of the equipment.

TAMWORTH.—Nundle, August 7: Mr. Ballantyne reports under above date that fair progress is being made on construction work. The dam is nearly completed. Grade for mill site is delayed on account of striking a hard diorite reef. The road is completed and machinery being delivered on the ground. The drive on No. 2 reef has been advanced 16 feet, the reefs shows in the whole face of drive from 2 inches to 8 inches thick, and will give some good stoping ground. We have saved ore in driving which will pay well in our own mill, but not rich enough to ship to the public mill. Will ship 8 sacks of quartz to railway by return teams this week, and will give you full particulars in a few days. I am making every endeavour to forward the erection of the mill.

TIGER (MASSI KESSE).—Report of the superintendent engineer for the month of July: Drive No. 1. Measurement for the month 86 feet; total measurement 165 feet. We are making excellent progress in driving here, as the ground is in our favour (soapstone). We are timbering the drive.—Drive No. 2. Measurement for the month 53 feet; total measurement 113 feet. We have reached the Guy Fawkes boundary, and have commenced driving on a leader, showing good gold, in our own ground. This leader is doubtless connected with the reef we are driving to intersect in No. 1 drive.

WENTWORTH EXTENSION.—Report dated August 10: Main shaft, Carroll's No. 2. Total depth 107 feet, progress for week 10 feet, without change.

WOODSTOCK (New Zealand).—The mine manager's report for the month of July, received by mail, states:—Since sending is my last monthly statement work on the Maria reef has been confined to the stopes, and here decided change has taken place not only in the size of the lode, but also in the quality of the ore coming thereto. This is especially the case at the south end of the block, where the lode has widened out to 7 feet between the walls, and signs of a further increase in its width are not wanting. Here there is a marked increase in the percentage of gold, with a corresponding decrease in the percentage of silver, and in the future the bullion resulting from the treatment of this ore should be of better quality. The level on Shepherd's lode has now been extended for a distance of 124 feet south of the crosscut, but at present the lode is somewhat kinked about and the ore is "bunchy" in consequence. About 25 feet back from the face we passed through a section which averaged 2 feet in thickness, and from this the ore samples taken out and assayed varied from £4 to £26 per ton in value. It is characteristic of this lode that the richest ore is invariably found in the vicinity of "breaks," and therefore it would be no surprise to me to strike exceptionally rich stuff at any moment. When the requisite timber is in position I intend opening out on this lode, where the richest ore was passed through, and here I expect to meet with satisfactory results. At the mill (10 stamps) during the 26 days' run ending 29th July, 240 tons of ore were treated on the stopes on the Maria reef, yielding £988 7s., equivalent to £4 2s. 4d. per ton.

BREMNAES GOLD.—The following report has been received from the mine dated Haugesund, September 13:—Section 4. In winze sinking in bottom of 400 north the quartz has increased in width to nearly 2 feet, and is of good quality, showing gold and assaying 7 dwt. per ton. In the 200 south level the quartz maintains some good quality, but in place of the dioritic schist, which for some distance has accompanied the quartz, we now have a hard quartzite. Sinking in bottom of same level north we have a run of quartz nearly 3 feet in width, containing a little mineral, assaying 3 dwt. gold per ton. A stope working in back of 150 north is producing good quartz, showing an abundance of galena and occasionally gold. In upper workings, section 5, we have two men stoping north of shaft and two rising in back of first level. In the stope the quartz varies from 6 to 10 inches in width, and has value for free gold 10 dwt. per ton. In the rise the quartz is of greater width, but only a 6 inch run on footwall has like gold value as stope quartz. A little blasting has been done in lower workings on this section, but no regular work can be undertaken before arrangements be made for the proper ventilation of the mine. I find that by continuing a winze, sunk from surface by the previous owners, a further depth of about 40 feet, communication will be made with end of level at a point about 150 feet from shaft, thereby securing the needed ventilation. Work both underground and at surface is progressing satisfactorily, and all machinery is in good order and working well.

BAYLEY'S REWARD.—The following cable dated the 20th inst. has been received by this company's London office from its head office at Melbourne: "220 ounces 270 tons."

HOLCOMB VALLEY.—In a letter dated September 5, Mr. Erichsen (director) says:—The next cut will take us into the main channel at a few points (the channel winds about), but generally it should be much better. We reckon we shall have worked this cut as far as it is worth working by September 11, more or less; then there will be three or four or five days spent in getting the shovel back and stripping the overtop of the next cut, and after that (say) by September 17, we ought to be doing very much better than anything we have done yet.

met and quartz veins; and as I could not find any gold in it I put it on one side. There is little stone making in the face of drive today, and we may be coming on to a fresh make of stone. There is now about 93 feet between this drive, and the drive coming south from main shaft. South drive No. 1 shaft has been extended 30 feet, making total distance 49 feet from shaft. At the time of my last report the stone in this drive was looking rather poor, but I am pleased to say has improved during the fortnight. The footwall slab has thickened, and seems to be cutting the headwall slab off. For the last few days the stone shows gold freely. There is now about 63 feet between this drive and No. 2 south shaft. There is a good body of stone in this shaft, and I would suggest that the men be taken out of north drive, No. 1 south shaft, and put into No. 2, to drive north, and connect these two shafts. We have driven for the fortnight 116 feet, and broken and raised to surface about 200 tons of stone.

KEMPINKOTE.—Mine report for the fortnight ending Aug. 26: Ga land's shaft has been sunk 10 feet 3 inches, total depth from surface 406 feet 9 inches. The lode in the bottom is the full size of the shaft, assaying 1 dwt. 8 grains of gold per ton. 345 north drive has been driven 25 feet 6 inches, total distance from main crosscut 67 feet. The lode in the end is mixed with schist, the average assay being 12 grains of gold per ton. 345 south drive has been driven 34 feet 9 inches, total distance from main or west 72 feet; 70 feet from main crosscut we met with the lode. The lode in the end is the full width of the drive, assaying 12 grains of gold per ton. 245 N.C. 1 crosscut west. 100 north main crosscut has been driven 11 feet 6 inches, total distance from footwall 89 feet 6 inches; 82 feet from the footwall we met with soft schist, which continued to within 1 foot of the present end. The ground in the end is hard country rock. The drivage has been stopped; 50 feet west of the footwall in the crosscut we have started to sink a winze, the lode assaying 12 dwt. 23 grains. The 245 south drive has been driven 19 feet 9 inches, total distance from main crosscut 361 feet 6 inches. The strata of the lode in this drive is running in line with the footwall. In the end the lode is 4 feet wide, assaying 2 dwt. 20 grains of gold per ton. 280 feet south of main crosscut we have started to crosscut west.—Henry's shaft. Our coolies have been engaged in cutting down the shaft, and have sunk 3 feet, total depth from surface 345 feet. There is no change in the bottom of the shaft.—341 north drive. On the 19th inst. we put a machine to drive north at this depth, and have driven 6 feet 9 inches, total distance 6 feet 9 inches. The ground in the end is hard schist. 258 north drive 10 feet 3 inches, total distance from main level 77 feet, 75 feet from level we met with soft schist; after driving 2 feet in the drivage was suspended.—258 N.C. 1 crosscut west. 208 feet south of main crosscut has been driven 4 feet, total distance from side of level 10 feet. Lode in the end full width of drive assaying 3 dwt. 5 grains of gold per ton.—173 crosscut west. 100 feet north of shaft has been driven 12 feet 9 inches, total distance 18 feet 9 inches. The ground in the end is hard schist.

LINARES.—Mine report dated September 11: Pozo Ancho Mine, Peñal's engine shaft. In the 200 fathom level driving south the men continue to make rapid progress. The lode in the 200 west is small and without value. In the 155 west the lode continues regular and compact. The lode is valued at £10 per fathom. In the 178 west of Warne's crosscut the lode is very wide, and turns out good lumps of ore, and is now estimated at 1 ton per fathom. No. 278 winze sinking below the 180 fathom level, valued at 2 tons per fathom, has holed to the 155 fathom level. The stopes continue to yield well. Surface works are kept on very regularly, and the machinery is in good working order. Estimated raisings for September, 200 tons. The tributaries returned 124½ tons of ore in the past month.—Los Quinientos Mine. Taylor's engine shaft. In the 185 east the lode is large and fairly easy for driving through, worth £10 per fathom. The 165 east is laying open valuable ore ground, worth 2 tons per fathom. In the 150 east nothing of value has been met with. The lode in the 130 east is small and unproductive. Agapito's winze below the 165 fathom level is going down through powerful lode, containing good stones of ore. Estimated raisings for September, 150 tons. The tributaries returned 61 tons of ore in the past month.

MOUNT LYELL.—The London board have received the following report from the Melbourne board for the week ending July 24:—Surface prospecting shaft, hanging wall. The shaft has been sunk 7 feet, total 77 feet; the sinking is in schist and ironstone.—No. 1 crosscut north drive No. 3 tunnel. The crosscut has been driven 2 feet 6 inches, total 26 feet 6 inches; pyrites somewhat harder.—No. 2 crosscut north drive No. 3 tunnel. The crosscut has been driven 1 foot, total 19 feet; pyrites very hard.—South drive No. 3 tunnel. The drive has been advanced 7 feet, total 399 feet; there is no change.—North drive, Indicator winze. The drive has been driven 7 feet, total 55 feet; country schist and conglomerate; good copper ore showing along the wall.—North drive No. 4 tunnel. The contractors have driven 2 feet 6 inches, total 183 feet; no change.—South drive No. 4 tunnel. The face has been advanced 11 feet, total 120 feet; country ironstone and barite; false showing along the pyrites wall.—No. 2 winze south drive 50 feet level engine shaft No. 4 tunnel. The winze has been sunk 3 feet, total 18 feet; sinking in good copper ore; the auriferous vein is going down and showing gold, but is very thin.—Engine shaft No. 4 tunnel. The bottom has been cut out and room made for the chamber set, total depth 147 feet; timbering up was commenced to day.—No. 5 tunnel. The contractors have driven 4 feet 6 inches, total 1045 feet; country conglomerate and quartz.—Progress report for week ending July 24:—Haulage line bank engine. All connections made, and gave engine trial run to-day, working very smoothly. Now fixing brake gear and flooring and expect to complete plant by middle of next week, and will then proceed to platelaying. Cable and rollers in position.—Sister site. Retaining wall for bins and trestles in progress, and shot piling in progress. Site for flues and stack being cleared.—Converter site. Excavation in progress.—Brick plant, sawmill, and limekiln. Running full time.—Weather. Fine and good.

NEW CHIMES.—The following is taken from the statement of working for month of July:—Balance profit, £2436 14s. 1d.—Capital expenditure. Main shaft, Chimes reef, £12 11s. 6d.; Florence claims, £5 19s. 10d.; buildings, £53 3s. 8d.; dams, £95 16s. 6d.; cyanide plant (concentrates), £46 17s. 4d.; furniture, £96 9s. 6d.; total, £310 18s. 4d.—Analysis of working expenses and revenue. Mining and hauling, 10s. 8d. per ton; transport and m'ling, 4s. 5d. 28d. per ton; maintenance, 3s. 2d. 6d. per ton; general expenses, 2s. 2d. 3d. per ton; total, £10 0s. 6d. 78d. per ton; expended on development, £5 5d. per ton; total working expenditure, £1 7s. 0d. 29d. per ton. Native gold, £1 12s. 3d. 6d. per ton; concentrates, 2s. 11d. 8d. per ton; tailings, 3s. 11d. 9d. per ton; total revenue, £1 19s. 2d. 20d. per ton; net profit, £12. 1s. 7d. per ton.—Extracts from manager's report. 40 stamps ran 291 days, quartz milled 4013 tons, tailings treated by cyanide process 2850 tons, smelted gold won in mill 1810 ounces 10 dwts., bullion won from tailings 388 ounces 1 dwt., total output as declared 2198 ounces 11 dwts., yield per ton mill 9.02 dwts., driven on Chimes reef 361 feet, sunk and risen on Chimes reef 27 feet, crosscut driven 52 feet 6 inches, main shaft sunk 3 feet, total footage for month 443 feet 6 inches. 66 tons (wet) of concentrates assaying on an average 4 ounces 18 dwts. 2 grains have been won and are stacked pending the completion of the company's own works for treating them by cyanide. Native labour is still very scarce.—(Signed) T. Andrew.

7 NORTH-EAST QUEEN.—The following fortnightly report has been received from the mine, dated Charter Towers, August 2:—On the 25th ult. Balks and party crushed 1 ton of stone for 29 ounces 6 dwts. 21 grains smelted gold. Their stope does not look so well at present, the reef being small. On the 31st ult. Norchey and party from No. 1 level west crushed 7 tons 10 cwt. for 7 ounces 11 dwts. smelted gold. The stone was cut out with them so they ceased work. Brown and party No. 1 east are crushing now, and their returns will be in to-morrow. Hamilton and party are still driving and stoping on the eastern side above No. 2 level. The stope carries from 4 to 8 inches of ore, with veins of quartz here and there through the formation: the stone in the ore at present looks poor. Balch and party below No. 2 east have a strong reef of very heavy mineral stone in their drive, and the stope will average 10 to 14 inches of fair stone. This party will commence crushing fortnightly report.

next week. Soden and party No. 3 level west are stoping on from 4 to 12 inches of fair looking mineral stone. Jordan and party in the intermediate level west have from 8 to 10 inches of stone, and they will crush next week. Wherry and party have 10 to 16 inches of heavy mineral stone on the footwall, and from 2 to 8 inches of good stone on the hanging-wall. I have let the adjoining block to Balch and party to Kemp and party. They are going to rise from No. 3 to cut the reef worked by the first-named party on the 20th ult. I have got the rope on the eastern drum turned end for end. During the fortnight we have hauled 56 tons of stone from the different parties.—(Signed) John T. L. Williams.

NAMAQUA COPPER.—Abstract of superintendent's report for July: Tweefontein Mine, 125 fathom level east. It is expected that the lode will be met with in a very short time.—115 fathom level east, No. 33 winze. This winze being now at the required depth to meet the 125 fathom level it has been stopped. There is now every appearance of there being a valuable body of ore in this direction. Worth 7 tons of ore per fathom.—105 fathom level west. There is scarcely any change to notice in this driving. Worth 2 tons of ore per fathom.—95 fathom level west. There is also little change to notice in this driving. Worth 4 tons of ore per fathom.—95 fathom level west, No. 31 winze. This winze has been suspended.—95 fathom level west, No. 35 winze. This winze is being sunk through to the stopes in the back of the 105 fathom level. Worth 6 tons of ore per fathom.—85 fathom level west. The lode here continues to be well-defined, and more than the full breadth of the level. It contains a little copper ore, but not enough to value.—Stopes. No. 1 bottom of 105 fathom level west, No. 2 back of 105 fathom level west, No. 3 bottom of 95 fathom level west. There is very little change in these stopes; they continue to yield the usual quantity of ore. Worth respectively 10, 9, and 8 tons of ore per fathom.—No. 2 shaft, 25 fathom level west. Although the ground is unfavourable for working, it is not of so much value for copper ore. An improvement, however, is anticipated, there being a very promising outcrop at some little distance farther west. Worth 3 tons of ore per fathom.—Stopes in the back of the 25 fathom level. These stopes continue to yield large quantities of fair quality ore; they are opening up well, and are each worth 9 tons of ore per fathom.—No. 4 shaft, intermediate levels east and west. These drivings are opening up profitable ground, and are each worth 8 tons of ore per fathom.—Intermediate level north crosscut. This crosscut has been stopped. Worth 8 tons of ore per fathom.—Shipping. The *Glanrafon* and *Hinda* arrived at Swansea on August 19 and August 23, with about 650 and 700 tons of ore respectively. The *Golconda* left Port Nolloth for Swansea on September 11, with about 750 tons of ore.—Output for August, 500 tons of ore of 26 per cent.

OOREGUM.—Superintendent's report for the fortnight ending August 26: Taylor's shaft sunk 11 feet 6 inches, total depth below the 760 feet level 63 feet. Lode 1 foot 6 inches wide, assay value 1 ounce 17 dwts. 10 grains. The 760 feet level south driven 36 feet 6 inches, total 226 feet 6 inches. Lode 1 foot 8 inches wide, assay value 4 ounces 3 dwts. 10 grains. No. 1 winze 760 level south sunk 5 feet 6 inches, total 10 feet 6 inches. Lode 2 feet wide, assay value 3 ounces 5 dwts. 8 grains. No. 1 rise 760 feet level south risen 9 feet, total 30 feet. Lode 4 feet wide, assay value 2 ounces 5 dwts. 17 grains. The 760 feet level north driven 16 feet, total 110 feet. Lode 1 foot 4 inches wide, assay value 1 ounce 17 grains. No. 1 rise 760 feet level north risen 11 feet 6 inches, total 31 feet 6 inches. Lode 3 feet 9 inches wide, assay value 2 ounces 3 dwts. 15 grains. The 660 feet level south driven 15 feet 6 inches, total 397 feet 6 inches. Lode 8 inches wide, assay value 4 dwts. 8 grains. No. 1 winze 660 feet level south sunk 7 feet 6 inches, total 55 inches 6 inches. Lode 3 feet 6 inches wide, assay value 3 ounces 14 dwts. 8 grains. No. 2 winze 660 feet level south sunk 1 foot 9 inches, total 29 feet 3 inches. Lode 9 inches wide, assay value 10 dwts. 20 grains. The 560 feet level south driven 2 feet 6 inches, total 543 feet 6 inches. Lode 1 foot 4 inches wide, assay value 2 ounces 1 dwt. 9 grains. No. 3 winze 56 feet level south sunk 4 feet 6 inches, total 59 feet. Lode 10 inches wide, assay value 2 ounces 4 dwts. 15 grains. No. 4 winze 560 feet level south sunk 4 feet 6 inches, total 28 feet 6 inches. Lode 1 foot wide, assay value 1 ounce 1 dwt. 19 grains. The 460 feet level south driven 5 feet 6 inches, total 540 feet. Lode 1 foot 8 inches wide, assay value 2 ounces 6 dwts. 19 grains. Wallroth's shaft sunk 8 feet, total depth 1086 feet 6 inches. The branch on which the shaft has been sunk for some distance, although carrying a well-defined hanging wall, is very contracted; hence, no sample was taken. The flats at the 1060 feet level were completed on the 20th instant. Since then the timberman has been fixing necessary timber and sills, which he will finish within this week. The crosscut west from 1060 feet level south driven 16 feet, total 30 feet 6 inches; no discovery. The 960 feet level south driven 34 feet; total 351 feet 6 inches. Lode 6 inches wide, assay value 9 dwts. 19 grains. No. 1 winze 960 feet level south sunk 5 feet, total 50 feet 6 inches. Lode 2 feet wide, assay value 5 dwts. 10 grains. No. 2 winze 960 feet level south sunk 5 feet 3 inches, total 10 feet 3 inches. Lode 2 feet wide, assay value 6 dwts. 12 grains. No. 1 winze 260 feet level north, sunk 6 feet, total 32 feet. Lode 1 foot 6 inches wide, assay value 3 dwts. 6 grains. The 860 feet level south driven 30 feet 6 inches, total 657 feet. Lode small; no sample taken. No. 2 winze 860 feet level south sunk 6 feet, total 80 feet. Lode 2 feet wide, assay value 2 dwts. 4 grains. No. 3 winze 860 feet level south sunk 5 feet 6 inches, total 51 feet. Lode 1 foot 6 inches wide, assay value 12 dwts. No. 4 winze 860 feet level south sunk 5 feet 9 inches, total 20 feet. Lode 1 foot wide, assay value 8 dwts. 10 grains. The 760 feet level south driven 33 feet 9 inches, total 844 feet 9 inches. Lode 6 inches wide, assay value 10 dwts. 21 grains. No. 3 winze 760 feet level south sunk 7 feet, total 36 feet. Lode 1 foot 9 inches wide, assay value 15 dwts. 6 grains. The 760 feet level north driven 15 feet 9 inches, total 433 feet 9 inches. Lode 6 inches wide, assay value 5 dwts. 10 grains. No. 2 winze 760 feet level north sunk 6 feet, total 72 feet. Lode 1 foot wide, assay value 8 dwts. 17 grains. No. 4 winze 660 feet level south sunk 1 foot, total 100 feet 3 inches. Lode 1 foot 6 inches wide, assay value 9 dwts. 19 grains; communicated with 760 feet level south. No. 7 winze 660 feet level south sunk 6 feet 6 inches, total 49 feet 9 inches. Lode 3 feet 3 inches wide, assay value 2 ounces 6 dwts. 19 grains. No. 1 winze 215 feet 9 inches, total 77 feet. Lode 2 feet wide, assay value 7 dwts. 15 grains. No. 1 rise 215 feet 9 inches, total 132 feet 6 inches. Lode 2 feet wide, assay value 10 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 3 inches wide, assay value 5 dwts. 10 grains. No. 1 rise, 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value 15 dwts. 15 grains. The 710 feet level south driven 16 feet 6 inches, total 97 feet 6 inches. Lode 4 feet wide, assay value 19 dwts. 15 grains. The 610 feet level south, sunk 10 feet, total 79 feet. Lode 1 foot 2 inches wide, assay value 5 dwts. 10 grains. No. 1 rise 610 feet level south, commenced, risen 4 feet, lode 1 foot 6 inches wide, assay value 2 ounces 7 dwts. 21 grains. Probyn's shaft sunk 7 feet, total 1138 feet 6 inches. The 1050 feet level south driven 21 feet, total 158 feet. The strata in the end is bearing more towards the south, from which a little water is percolating, which we hope indicates that the lode will soon be met with. No. 1 winze 1050 feet level north sunk 4 feet, total 56 feet 6 inches. Lode 3 inches wide, assay value

ANGLO-MEXICAN.—The manager, writing from the mine under date August 7, reports as follows: New main tunnel. Good progress continues to be made in this tunnel, the work having been advanced 23 feet during the past week, making a total to date of 1721 feet. Apart from the progress noted, there is nothing of special interest to report regarding work.—Winze No. 2 Guadalupe. This winze was sunk 4 feet during the week under review, having now attained a total depth to date of 66 feet. The particulars relating to the work in this winze you will have noted from my last report, since which there have been no developments of interest.—Drift south from crosscut No. 2 east No. 3 level. This drift was advanced 12 feet during the past week, making a total length to date of 63 feet. The vein in the face of this drift is of a good width, averaging about 4 feet, and although it does not assay very well, the ore is nevertheless, of a fair grade, and looks well, having considerably improved over last week.—Upraise No. 10 No. 1 level. Good progress was made in this upraise during the past week, the work having been advanced 13 feet, giving the upraise a total height of 45 feet. The vein in the face of the upraise is about the average width, but carries ore of low grade.—Main drift north No. 3 level. This drift was started during the past week from crosscut No. 2 east from the air winze, and in the north extension of what we call the drift south from crosscut No. 2 east, both of which drifts go to form the new No. 3 level. At the point where this drift was started, we ran almost immediately into good ore, assaying about \$100 per ton in gold; but, as at points where we have cut this vein further north it has not shown ore of value, I am not yet prepared to form any judgment as to the continuity of the ore which we have cut out in the new drift. Another week's work will probably give us more definite information in regard to the value of this ground.—San Nicolasito tunnel. Progress was rather slow in this tunnel during the past week, due to the preparations necessary for the starting of another crosscut from same, and we, therefore, only advanced 11 feet. We have not yet been able to find the ledge again in this tunnel, and have no trace of it for 40 feet back, and the crosscut No. 1 east, which we have been running for some time has failed to show any signs of the vein in this direction. As already mentioned, we have now started another crosscut to the west, and I shall await developments in this direction with interest.—Stopes. The stopes continue to look well, and are keeping us well supplied with ore. The rich streak which we have had, however, has become again quite scattered, and will not admit of being taken out separately.

ALAMILLOS.—Mine report, September 11: In the 85 fathom level driving west of Taylor's engine shaft the lode has a promising appearance, and is valued at 1 ton per fathom. In the 160 west of the same shaft the men are driving south to prove that part of the lode. The lode in the 100 east of Judd's engine shaft continues unproductive. Andre's winze below the 20 fathom level is being sunk in a valuable lode worth 3 tons per fathom. Joe's winze below the 50 fathom level has improved, and is now going through a powerful lode, worth 2 tons per fathom. Sans' winze sinking below the 60 fathom level the lode is regular and well defined, and is valued at 1 ton per fathom. The stopes continue to yield well. Surface works are kept on with great regularity. The machinery is good working condition. Estimated raisings for September 250 tons. The tributaries' returns amounted to 43½ tons of mineral in the past month.

AUSTRALASIAN MINING.—Fortnightly report of Mr. John James, mine manager, dated August 1: For the past fortnight Bishop and party have sunk the shaft 26 feet, total 357 feet, and timbered 27 feet, total timbered 328 feet. There is no change in the sinking. The country rock is still dark limestone but is breaking better. The water keeps about the same. The contractor has eleven men employed in the sinking. The manager of the adjoining claim south reports cutting a leader carrying gold in crosscut at 500 feet level.

BAYLEY'S WEST.—The manager at Coolgardie reports under date August 13. Bayley's West Extended are still getting out good stone, and as the shoot of gold is dipping south it should encourage us to push our No. 3 shaft down with all possible speed.

BAYLEY'S WEST EXTENDED.—The manager at Coolgardie reports under date August 13. Development. No. 1 shaft south drive on course of lode have driven for week 4 feet, making total 18 feet. We have still splendid stone showing in the face of the drive, most of the gold showing being very coarse. The stone we have broken out is worth at least 5 ounces per ton. Reef is opening up splendidly.

BAYLEY'S REWARD CLAIM.—Mining report dated Coolgardie W.A., July 29: 380 feet level. At this level we are pushing on the south drive rapidly, having extended 16 feet for the week, making a total of 108 feet. Indications are more favourable to picking up reef, though, so far, we have no signs of quartz.—Stopes. We continue breaking stone in all the stopes, both at the 100 feet level and Gordon shaft 50 feet, also the air shaft (Everard's). The south drive from Gordon shaft at 50 feet level is being continued, the stone alternating, making, and pinching, the country being very unsettled; extended for week 4 feet, total 194 feet.—Keating shaft. We have been doing a little work in Keating shaft, putting in a drive south at about 30 feet, now in 12 feet. The reef is solid and looks well, though no gold has been seen in the breaking, average width 4 feet 6 inches.—Machinery. Mr. Ryan is rapidly getting the oil engine erected, and in a week or 10 days will be able to give her a trial run by herself.—Alteration in pits. At the end of this (battery) fortnight we intend to stop crushing, having in the meantime got most of the woodwork of the new pits ready made. Mr. Ryan will then take advantage of the stoppage, and connect the oil engine with the battery shaft. All the surface hands I mean to put off for a fortnight and do the pit; sinking and timbering by men up from below, cutting down expenses while the battery is stopped as far as possible. I think these alterations will take a fortnight at least, and perhaps longer, but no time will be wasted, and three shifts continually employed.—Assay office. Much as we want an office and good furnaces, this work must stand till the battery is good again.—Your wire of July 24 to hand promptly. "What distance Consols shaft from Reward battery, what amount team required to pump present supply of water, if we erect pump and use Consols' steam." Replied to July 25. "Bottom Consols water shaft Reward Battery 2100 feet, suitable pump about 4 horse-power. Writing particulars, pump and piping, should you adopt scheme."—Tom Browne, acting manager.

BAYLEY'S REWARD NO. 1 SOUTH.—Mining report dated Coolgardie, West Australia, dated July 29; 170 feet level. In the north drive at the bottom of the main shaft for the week 6 feet 6 inches has been driven, making a total of 29 feet. The stone is of much the same character, and occasionally fine gold is noticed in the breaking, width about 3 feet 9 inches in face.—120 feet level. With the exception of this level and the 120 feet no underground work is being done. At the 120 level we have started a winze south of main shaft, working one shift only. This winze is being sunk on the west wall, and where the reef is about 10 feet wide; total depth sunk for week is 3 feet 6 inches; a little fine gold noticed in course of work.—Battery. We are still running the two shifts only, and crushing nothing but shaft and bottom level stone, the Berdan pans being kept running continually on the blanket pyrites caught. Just now we are not doing any crushing for the public, and so have our full 10 head working. The plates don't look so well as last week, but as we shall not clean up till next Friday there is plenty of time for improvement.—General. We have had some few slight showers, but not enough to put any more water in the dam. We still have a sufficient quantity to last our engines for a week or two without buying any.—Tom Browne, acting manager.

BIG BLOW.—Extracts of letters from Mr. W. Michel Vivian, Coolgardie, August 6: You will be pleased to hear that our water as we use it out of the shafts is getting less saline every day; in fact, is now only slightly brackish, and the camels drink it freely if they can get it. I feel sure that we shall have no trouble with it in the boilers. In this particular we are favoured as compared with other mines in the neighbourhood, where the water is highly saline.—August 13: I have to report that since my last communication the 5 stamp battery has commenced crushing. Unfortunately, the hired engine which we are using for driving it has proved itself unfit for the work, in that it is of insufficient power, and in

bad condition, with a boiler that primers badly. Consequently, the running of the mill is intermittent and irregular, and the breakdowns frequent; in fact, the stoppages amount to about half the time. This being so, and as our boilers are now here, I have determined to lose no time in erecting and fixing our own engine and the remainder of the battery (15 stamps) on the permanent site. This work will take from eight to ten weeks. We are engaged in erecting poppet heads on the water shaft, and fixing at the same place one of the small boilers, the saw bench, and force pump for delivering the water at the main battery. Owing to the difficulty with the engine, and the consequent over-filling of the stamper box and scouring of the amalgam already collected, as well as the uncertain loss in the tailings, I am not disposed to consider the trial crushing anything like a representative one, and I am anxious to get our main battery properly at work so as to fairly and fully test the quartz. You will be pleased to hear the first 20 mile section of the Southern Cross-Coolgardie Railway will be open for traffic to-morrow. This will make a reduction in the cost of transport here.

CAPE COPPER.—Ookiep: Captain Henwood, July 31. The ground in the back of the 130 fathom level east and west of winze having become poor the men are put to carry a stope over the bottom of this level west of winze, which is producing little copper ore, but not to value. The 92 fathom crosscut (No. 19) south-west of main east level for the present is again unproductive. The 92 fathom level west of No. 19 level has been suspended. The 92 fathom level east of No. 19 level is yielding stones of copper ore, and at times a little saving work. The rock in the drive south from stope in back of 68 fathom level south-east of No. 16 winze is spotted with copper ore. The rock in the 58 fathom level west of old shaft one part of the month presented a few spots of copper ore—the fore-breast is massive quartz.—Trial Mines. Captain Henwood, July 31: Nababeep South. The rock in the 74 fathom level north-east of shaft has not undergone any change to notice since last report. The 59 fathom crosscut north of No. 1 winze is yielding saving stuff.—Spectakel. Good progress is being made in driving the 46 fathom crosscut north on No. 2 floor course. The rock contains a few spots of copper ore.—Copperberg. The stope in back of adit level east of No. 1 south crosscut is yielding about 2 tons of copper ore per fathom, and the stope west of No. 1 south crosscut is worth 5 tons per fathom. The rock in the 30 fathom crosscut south of No. 1 trial shaft is composed chiefly of quartz, and is looking a little more favourable for copper. The ground in the 15 fathom crosscut south of No. 2 trial shaft contains a few spots of copper ore, but the north crosscut at this depth is poor.—Ookiep east. The sink in bottom of stope below the 66 fathom level has been suspended, and the men are put to drive at the 80 fathom level west of south-east crosscut to prove the ground westward, and ultimately to communicate with the sink.—Returns for July. Ookiep, 2155 tons of 19 per cent. Spectakel, 145 tons of 31 per cent.—Arrivals at Port Nolloth. The ss. *Cheniston* and *Illaora*.—Tilt Cove: East Mine. Output for July. 5200 tons of 3 ¾ per cent. wet assay.—Arrivals at Swansea. The ss. *Caloric* with 2100 tons of ore, and the ss. *Alaska* with 2130 tons of regals.

CORAMONDEL.—Superintendent's report for fortnight ending August 4:—Prospect shaft. Drift north from crosscut east of 500 south has been driven 22 feet, making its total length 79 feet 6 inches. There is still a small branch of quartz in the end, and this shows a trace of gold in the assay. Winze below 500 on new shoot sunk 16 feet, total 71 feet 6 inches. There is no quartz in present bottom, the winze having entered the slide which disturbed the lode in the level above. Rise back 440 west of dyke risen by hard labour 7 feet 6 inches, total height above level is 136 feet, and the lode in back is 1 foot 6 inches wide, worth 3 dwts, 18 grains of gold per ton. Crosscut east of 320 feet level north of shaft driven by hand labour 10 feet, total 17 feet from level. Crosscourse in end is 2 feet wide. Lode not intersected. 320 north of rise on new shoot driven 18 feet 3 inches, total 172 feet. Level is being driven in a north-east direction, but has not yet reached the eastern portion of the lode. 320 south of rise on new shoot driven 29 feet, total 127 feet. Lode has improved, being now 4 feet wide of solid quartz, assaying 12 dwts, 12 grains of gold per ton.—200 north on new shoot. This level is now being driven north-east across the fold, and the end is at present in country rock. 32 feet has been driven during the fortnight, making the total distance from former drift 47 feet.—200 south of crosscut north-east, west of dyke. Driven by hand 4 feet 6 inches, total 16 feet. Lode in present end is 5 feet wide and assays ½ ounce of gold per ton. The rise in back 200 against new east shaft has been risen 31 feet 6 inches, total 42 feet above the level. New east shaft has been sunk 16 feet, and its total depth from surface is 120 feet. These points we hope to communicate during the coming fortnight.

CHAMPION REEF.—Superintendent's report for fortnight ending August 26:—Garland's shaft. This has been deepened 3 feet 3 inches, total depth 948 feet 6 inches. Lode 2 feet, assaying 3 ounces 14 dwts, 8 grains of gold per ton. The 940 feet level north has been driven 12 feet 3 inches, total length 86 feet. Lode 2 feet, assaying 2 ounces 18 dwts, 17 grains of gold per ton. The 940 feet level south has been driven 13 feet 3 inches, total length 89 feet 6 inches. Lode 1 foot 6 inches, assaying 2 ounces 12 dwts, 16 grains of gold per ton. The driving of the 940 feet north and south levels is suspended for a time until the cutting of the plat is completed at this level. The 840 feet level north has been extended 22 feet, total length 491 feet 9 inches. Lode 2 feet, assaying 2 ounces 1 dwt, 18 grains of gold per ton. No. 3 rise in back of this level has been risen 19 feet 3 inches, total height 53 feet 6 inches. Lode 2 feet 6 inches, assaying 1 ounce 15 dwts, 8 grains of gold per ton. No. 3 rise above the 840 feet level south has been risen 17 feet, total height 80 feet. Lode 2 feet 6 inches, assaying 2 ounces 6 dwts, 3 grains of gold per ton. The 740 feet level north has been driven 20 feet, total length 696 feet 6 inches. Lode 1 foot, assaying 19 dwts, 6 grains of gold per ton.—New rise. No. 5 above this level risen 15 feet, total height 15 feet. Lode 2 feet 6 inches, assaying 1 ounce 6 dwts, 12 grains of gold per ton. The 630 feet level north has been lengthened 27 feet 9 inches, total length 824 feet 3 inches. Lode 6 feet, assaying 1 ounce 13 dwts, 10 grains of gold per ton. No. 6 rise above this level risen 11 feet, total height 56 feet 6 inches. Lode 2 feet, assaying 1 ounce 6 dwts, 20 grains of gold per ton. Winze below this level has been sunk 1 foot, total depth 106 feet; this is communicated to the 740 feet level north.—Ribblesdale's shaft. The 640 feet level north has been driven 26 feet, total length 78 feet 6 inches. Lode 6 inches, assaying 18 dwts, 20 grains of gold per ton. The 640 feet level south has been driven 17 feet, total length 65 feet. Lode 6 inches, assaying 1 ounce 6 dwts, 12 grains of gold per ton. The 540 feet level south of east crosscut of 540 south of shaft has been driven 24 feet, total length 308 feet 6 inches. Lode 6 inches, assaying 1 ounce 5 dwts, 18 grains of gold per ton. Winze below this level has been sunk 17 feet, total depth 109 feet 6 inches. Lode 2 feet 6 inches, assaying 19 dwts, 19 grains of gold per ton. Rise in back of this level has been risen 17 feet, total height 54 feet. Lode 4 feet 6 inches, assaying 1 ounce 16 dwts, 4 grains of gold per ton. Incline winze north of No. 1 west crosscut at 440 south of east crosscut south of shaft has been sunk 17 feet 6 inches, total depth 168 feet 6 inches. Lode 3 feet, assaying 1 ounce 21 grains of gold per ton.—Carmichael's shaft. There is no sinking to report, as we are still employed cutting plat. The 540 feet level north has been driven 24 feet 6 inches, total length north of east crosscut 66 feet. Lode 4 feet 6 inches, assaying 1 ounce 6 dwts, 3 grains of gold per ton. Rise in back of level risen 8 feet 3 inches, total height 30 feet. Lode 3 feet, assaying 2 ounces 16 dwts, 20 grains of gold per ton. Incline winze below 440 north has been sunk 16 feet 9 inches, total depth 91 feet 9 inches. Lode 3 feet, assaying 1 ounce 13 dwts, 23 grains of gold per ton.—Rowe's shaft. No sinking to report. The 515 feet level north has been driven 23 feet 3 inches, total length 61 feet 3 inches. Lode 3 feet, assaying 2 ounces 16 grains of gold per ton. Winze below 415 feet level north has been sunk 12 feet 9 inches, total depth 59 feet. Lode 2 feet, assaying 2 ounces 11 grains of gold per ton.—Stopes.

CRAVEN'S CALRDONIA.—The following fortnightly report has been received from the mine, dated Charters Towers, August 1. In the underhand stopes from the No. 9 level the reef is only about 5 or 6 inches thick. The crosscut at the end of No. 5 level has been extended a further 7 feet, making a total of 23 feet from the level. The reef that I mentioned in my last report has been broken down, and there is fully 10 inches of very nice looking stone going up over the old workings, and there is also about 7 or 8 feet of stone in the end of the crosscut, and during the next fortnight I intend to open out upon this stone. The level on the hanging wall reef has been extended a further 7 feet, making a total of 123 feet from the end of the crosscut, and the reef still remains about the same in the face. In the underhand stopes from this level the reef is about 6 or 7 feet thick. In the first three stopes over this level the reef is about 7 feet thick, but in the other four stopes it will average about 8 inches. The haulage of quartz for the fortnight is 71 tons, making a total of 256 tons towards the present crushing now going through at the Prudence mill.—(Signed) G. Cabassi.

FORTUNA.—Mine report, dated September 11: Canada Income Mine. In the 110 fathom level driving west of San Pedro's shaft the lode is regular and well defined, and is valued at 3 ton per fathom.—Juanito's winze below the 100 fathom level. The lode does not contain sufficient ore to value.—Los Salidos Mine. Taylor's engine shaft. In the 212 east we are getting through the ground speedily with the aid of the rock-drill. The lode in the 200 east is small and of no actual value. Julian's winze sinking below the 210 fathom level is valued at 1 ton per fathom. The winze is situated east of Taylor's engine shaft, and in advance of the 212 fathom level. No change of importance has taken place in the stopes. Surface works are kept on very regularly, and the machinery is in good working order. Estimated raisings for September, 225 tons. The tributaries returned 60½ tons of mineral in the past month.

GOLDEN FEATHER.—Driven out by heavy storm of rain last week, weather now cleared finely. Slight damage has occurred. Will finish pumping out claim and will have flumes replaced and sluicing under way within eight days. This remarkably early storm was received by cable from the company's general manager. The storm referred to occurs every year, usually about the middle of October, and its coming so early is a very good indication that the winter rains will not set in until late. On a former occasion, under similar circumstances, operations were continued in the bed of the river until late in December. The slight damage refers to the flumes, which can be very easily and quickly replaced. In accordance with the cable, sluicing should be recommended next Monday.

HAWK'S VIEW.—The following report has been received from the mine for the fortnight ending July 13: 1039. Four men employed in sinking vertical shaft have sunk to depth of 37 feet 6 inches, and have timbered shaft to depth of 13 feet 6 inches as the shaft and wet weather made it unsafe to work it.—1042. Two men employed to sink on underlying lode, have sunk to depth of 26 feet, also 5 feet thick, reef overhead coming into drive, one man making ladders for lease No. 108. Good stone being obtained.—1642. Three men employed in shaft drive, sunk 21 feet to boundary driven north 6 feet, good stone being obtained.—(Signed) S. Simmons.

HAMPTON GOLD HILL MINES.—The following is the fortnightly report of work done on Block 50, Main reef. The shaft on this reef has been sunk 8 feet, making the total depth of shaft from surface 50 feet. At this depth I have started to drive on the reef north and south. The south drive has been put in 4 feet, and the north drive 2 feet. The reef is over 3 feet wide and well defined. The stone prospects very fair, but it does not carry as much gold as it did nearer the surface. A shoot of gold may, however, be struck in the drive any day, as it looks splendid stone for carrying gold. With the exception of two days, I have only had one shift of men employed on this reef during the fortnight.—Blue reef. No work has been done on this reef yet, but I intend to start a small prospecting shaft to prove this lode some time during the fortnight.—White reef. After driving the crosscut at the 25 feet level 10 feet, I considered that the reef showing on the surface should have been met with; but as there was no sign of striking it I had two or three shots put in in the costean pit on the surface, which proved that it was the reef we had passed through in sinking the shaft. I had the drive, however, extended to a distance of 40 feet, in order to prove if there was any quartz going down from the blow further over to the west. Not meeting with anything, I have started to sink on the leader or reef in the shaft. It is dipping to the east. The average width of the quartz is 16 inches, and the stone is of good quality, showing gold freely. I intend on Monday to start another small prospecting shaft on another blow farther south on this line of reef. I have picked up some very fair stone on it. I have had two shifts of men employed on this reef during the fortnight.—General Remarks. The total number of men employed on the two leases, including carpenter, carter, and self, is 10. When sending this report I will also send in some stones with the carter.—John Thomson, mine manager.

HANNAN'S BROWNHILL.—Writing under date of August 3 the manager of the above company's mine reports as follows:—By this time I have collected some 5 or 6 tons of selected ore out of the rich chutes we have driven and sunk through. I mean stone that lying on the ore heaps would easily attract attention, and probably be stolen. It seems to me a great pity to put a lot of almost priceless specimens through the mill. Some are scientifically curious, and others are studded with gold throughout. Collector, museums, &c., would, I think, gladly pay a good price above the intrinsic value of the stone, and, probably, many of the shareholders would take advantage of the opportunity of purchasing a piece. Do you think it would be any use my sending you a few cases, for if we can get £5 or £6 an ounce for the gold in this way, it will be an advantage to the finances of the company. When we begin stoing, there is no telling what gems may come to light, and it may pay us to save some of the best.—Mine plans. I enclose additions made to the plans since my last month's survey. Since writing the above, I am in a position to add as follows:—No. 3 winze is still as good as ever, and an average sample from the bottom gave by assay 55 ounces 15 dwts, 21 grains.—No. 1 south away for the whole width of the vein 13 ounces 14 dwts, 9 grains per ton.—No. 2 south. Driving resumed, and a good pan prospect from the face has just been obtained. Driving will not be resumed here until No. 3 winze is finished.

KINSELLA.—Mine manager's report for the fortnight ending August 8:—Mine. Please find herewith foreman's report with the details of work done underground for the fortnight. One of fair grade is being opened up north of Poole's, or No. 1 north shaft, also south of No. 1 south shaft. The drillings from some of the holes in each drive at times showing good prospects of gold. In order to locate the shafts and make the information readable to you, the main or engine shaft will be the starting point, others numbering north or south as the case may be:—During the past fortnight we have been engaged driving on the lode at different parts of the mine at the 43 feet level. At the main shaft the south drive has been driven 25 feet, making total distance from crosscut 56 feet. The lode has averaged about 5 feet wide until the last two days, when it began to pinch, and is now about 3 feet thick. I have seen a little gold in the footwall slab of the reef all through the fortnight. Judging from this and prospects washed I should value one-third of lode at 1 ounce to the ton, the remainder of the lode is much poorer; about 55 tons of stone have been broken and sent to surface.—No. 1 north shaft. The north drive has been extended 28 feet, making total distance from shaft 44 feet. The lode is about 6 feet wide, and we have seen a fair quantity of gold through the stone from wall to wall. Many of the prospects I have washed have been very good. Some little change is taking place in the face of the drive at present; fully half of the reef on the headwall side is broken up, and seems poor. In the footwall slab I can see a little gold. A nice-looking block of stone is coming down overhead, in which roughish gold is visible. We have driven about 110 feet along this part of the reef, with an average of about 6 feet of stone, showing gold right through. I should expect it to return 1½ ounce to the ton.—No. 1 south shaft. The north drive has been extended 33 feet, making total distance from shaft 54 feet. In my last report the lode was getting very small and broken, and finally pinched out. We have driven about 27 feet, with only a formation about 2 feet wide, of a kind of soft

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METAL CIRCULARS.

GOLD FIELDS OF MYSORE.—Mine report for fortnight ending August 27.—South shaft. The 280 feet level end driving south end of crosscut has been driven a further distance of 18 feet, total 60 feet 6 inches. The lode has narrowed a little and is now 4 feet wide. There is no change in its characteristic appearance, which is composed of black rock, with vertical veins of quartz, which is throughout with arsenical pyrites, its assay value being 3 dwts. 3 grains of gold per ton. The north end has been driven 16 feet 3 inches, total 55 feet 6 inches. The lode has widened out to 5 feet, and is composed of much the same matter as that described above, its assay value being 2 dwts. of gold per ton.

—Oriental lode. Rise stope over the 280 feet level south. This rise is being put up to open out ground for stoping; the lode is 8 feet wide, and is composed of about equal parts of country rock and quartz. Two samples taken from this stope gave by assay 5 dwts. 2 grains and 6 dwts. 7 grains of gold per ton. The fork in bottom of the 380 feet level is finished. Tramroads are being laid in the level, and during this week we shall commence to rise for stopes in both north and south level, where we hope to find some payable quartz.—Middle shaft. Work has been resumed here in fixing the necessary timbers, bad plank, casing, &c., and getting the shaft in order for drawing stuff. The loading for the engine is built, and the engine will be put in place shortly.

LADY LOCH.—The manager, under date August 16, reports as follows:—Lady Loch. I am glad to be able to report very favourably on the east winze. We got some splendid stone out this week and the reef still looks well, but a little smaller, being at the present 2 feet 6 inches wide; and the winze is now down 35 feet.—Lady Forrest. Middle underlay shaft is now down 76 feet, exposing 2 feet of solid reef carrying payable gold. I have started timbering the main shaft, and hope to finish in about a fortnight. I had two men trenching on this block about 70 feet east from the Loch boundary, for the purpose of picking up the Loch reef, which has proved highly beneficial to the Lady Forrest. I cut the reef about 4 feet from surface; the stone is carrying gold visible to the eye, and the reef is already 10 inches wide. (The importance of this cannot be overestimated. It not only improves the Lady Loch property, but also enhances the value of the Lady Forrest, showing that the reef continues throughout the property.) Lady Forrest. North. I have stopped work in the north shaft and put the man to work in the new shaft just started about the centre of the property, and I have struck a good reef in this shaft about 20 inches wide, carrying gold visible to the eye, and I am of opinion that this reef will be a good one. It has a good ironstone formation both on the footwall and hanging-wall. The property is looking well.

NORTH-WEST AUSTRALIAN GOLD FIELDS.—The following report on the company's property at Talga has been received from Mr. James H. Walker:—The five leases that form the properties of the North-West Australian Gold Fields Company adjoin one another along the Talga-Talga line of reef, and comprise in the aggregate an area of 53 acres. The outcrop of this reef extends the entire length through Breen and Wilson's, Walker and Cunningham's and Geyer's leases—a distance of 2000 feet. The top of the reef has been stripped in places from 30 to 50 feet, and it is exposed the whole way through. The top of the range along which the reef runs averages 200 feet in height. The reef averages from 2 to 5 feet in width. The ore is brown in quartz, and every specimen taken from the top of the reef contains fine gold. There is no alluvial gold, the specimens being broken pieces of the reef. The stone, in my opinion, will go fully 3 ounces to the ton, and all that I have inspected looks much better than any I have seen from the Bamboo Creek Mines. The best of the leases, in my opinion, are Breen and Wilson's, Walker and Cunningham's and Geyer's. The stone in these claims carries fine gold distributed so generally throughout that they are preferred to any others on the field. A great advantage possessed by your property is that it can be opened up by adit levels, affording from 200 to 300 feet of backs above water level. Another advantage that your claims have over some of the others is that they are within 1/2 mile of the river, to which point this stone can be cheaply conveyed by means of an aerial tramway for treatment. There is neither water, timber, or fuel trouble to be feared on this field, as all exist in abundance. To sum up, I can confidently give it as my opinion that the Talga-Talga is the best field in the North-West of Australia, and the group of properties belonging to your company is the best in that field.

SUNBURST GOLD.—The manager, under date July 27, writes as follows:—No. 8 block in section 210. This party have about 25 tons of fair quality stone, which they intend to crush next week. They have nearly worked out this block.—Old shaft. This party have crushed 283 tons, for a yield of 41 ounces 8 dwts. 19 grains of melted gold, the result of five men's work for nearly five months. They have started to get out another crushing, and have put on two more men, making seven working."

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We beg to acknowledge receipt of a copy of the Mid-September number of Messrs. Mathieson's Monthly Mining Handbook.

Messrs. HENRY BATH and SON's Copper Report, dated September 17, says:—The Chili charters are advised as 950 tons, and the latest exchange is £17 15s. From the 4th to the 9th inst. the value of G.M.B.'s fluctuated between £46 15s. and £47 cash, but on the 10th, under fear of financial derangement in the United States, the price began to give way, and £46 10s. was marked, followed by £46 3s. 9d. on the 11th, with a recovery at the close of the day to £46 7s. 6d. More confidence has since been manifested in spite of heavier gold shipments, and this may be attributed to a reported interest in the great Anaconda group of mines of Montana, the argument being that present prices must be upheld, if not pushed higher for a profit to be realised. The production of this group for 1894 was 42,670 tons of fine copper. The market has been easier this morning on slight fall in New York. We close firm at £46 17s. 6d. cash, £47 5s. following after being 3s. 9d. lower.

—Oriental lode. Rise stope over the 280 feet level south. This rise is being put up to open out ground for stoping; the lode is 8 feet wide, and is composed of about equal parts of country rock and quartz. Two samples taken from this stope gave by assay 5 dwts. 2 grains and 6 dwts. 7 grains of gold per ton. The fork in bottom of the 380 feet level is finished. Tramroads are being laid in the level, and during this week we shall commence to rise for stopes in both north and south level, where we hope to find some payable quartz.—Middle shaft. Work has been resumed here in fixing the necessary timbers, bad plank, casing, &c., and getting the shaft in order for drawing stuff. The loading for the engine is built, and the engine will be put in place shortly.

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MINING IN CORNWALL AND DEVON:

NOTES ON MINING IN THE WEST.

(FROM OUR SPECIAL CORRESPONDENT.)

It becomes monotonous, to say the least of it, to be writing week after week of quiet times, and of hope deferred; but it is, unfortunately, impossible yet to speak of any increased activity, or of any immediate prospect of improvement in connection with the Cornish Share Market. At the same time, it is remarkable to notice the absence of any of those signs of despondency which, after such prolongation of bad times, might naturally have been looked for, and which in almost every other enterprise must have long ago become apparent. But the Cornish shareholder is a great optimist; and so long as he is able to pay his proportion of the cost of keeping the mine in which he is interested at work, he is willing to console himself with the hope that things will eventually revive and that then he will participate to all the greater extent by reason of the tenacity with which he has held to his stock. This is undoubtedly the feeling of most of the adventurers in the mines at the present moment, and it is astonishing to those who know most of the personnel of those who hold a considerable stake in Cornish mining, that they should have been able to continue thus far without any serious demur or forcing of stock on the market. A very large number of shares are held in five and tens by people to whom the difference of 6d. or 1s. on a call makes all the difference, but an examination of the share lists will show that for the last year or two they have not parted with their holdings, but have met their obligations as they were imposed. The large shareholders have, to their credit, stood by well, but several of the mines owe their continued existence largely to the pertinacity of the small holders, the defection of which would doubtless have also caused the bigger men to have dropped their shares also. How much longer this can go on without a material improvement in the price of mineral it is difficult to say, but there is a strong feeling throughout the district that the outlook is improving, and that a better range of prices will shortly prevail, and this is likely to act as a further spur to increased exertions.

MEANWHILE several of the mines are placing their houses in order, and it may be safely predicted that when they do get a chance of returning mineral again at a profit the results will show a wonderful improvement. Executives of the mines have been at their wits' ends to devise means of economy, and having found them the committees and shareholders may be relied on to take good care that there is no reaction. The old days of extravagance in working have gone, never, we hope, to return, and though it may be suggested that large outlays are being made, yet it must be remembered that all these are in the provision of means for further economy, in the way of labour-saving appliances. Every outlay that is now being made, that we know of, is with this object, and there is no more of that "pottering about" with a few score of pounds, to obtain temporary advantage, where a few hundreds or even thousands would effect a permanent improvement. This being so, it seems to be an opportune moment for the introduction of outside capital, and this is slowly being accomplished. More fresh capital has been put into good Cornish concerns within the last few months than in many years even when things were more prosperous. It is, indeed, an augury of good times when outside people can be found to put down their money in large amounts, such as, for instance, at Dolcoath, followed up, nobly as it has been by promises from people in the county, to more than provide all the capital required under the amalgamation and conversion scheme at Wheal Basset and South Frances. Cornish mining is by no means done, and even in these times, if more money is wanted for other mines offering a reasonable prospect of success, it can be found.

We understand that the shares which the present holders in South Frances and Wheal Basset were invited to apply for in the new company have been more than applied for, and when the allotment papers are sent out applicants will find that they are unable to obtain all the shares that they desired. The preliminaries in connection with the conversion into Limited Liability are proceeding satisfactorily, but it is doubtful whether they can be concluded in time to allow of the new arrangement taking effect on October 1, as was anticipated. Wheal Basset has done exceedingly well during the past quarter, and the accounts, which will be made up to the end of September, will show a profit of somewhere around £1500, probably more than less.

DOLCOATH is reported to be doing better; the mine is opening up well, and when the new level is open at the bottom, it is expected that a fine section of ground will be again available. The new winding-engine has been set to work, and with the other improvements which have been made underground and at surface, they will be enabled to deal with a larger quantity of stuff. When the 20 heads of stamp have been added to the Californian mill, and the new dressing-floors laid out, this quantity will be still further increased. When the capabilities of these improvements are known more accurately and officially, the effect on the shares will probably be appreciable.

THE East Pool-Wheal Agar difficulty has not yet been settled, and the term for which East Pool shareholders agreed to work the engine pending settlement will expire on Tuesday or Wednesday. An attempt was made by East Pool committee to arrange a meeting of the joint committees for Saturday last, but the intimation was only received at Wheal Agar on Wednesday, and Mr. Hattersley (the Chairman) was unable to get down from Yorkshire in time. Early this week, an attempt was being made to arrange a meeting at Plymouth for Saturday (to-day). We sincerely hope the engine will not be again allowed to stop.

WESTERN AUSTRALIAN GOLD EXPORT FOR JULY.

Field.	Quantity. Ozs. dwt. grs.	Value. £ s. d.
Ashburton	... 22 16 0	... 86 12 9
Coolgardie	... 9,369 2 22	... 35,602 15 1
Kimberley	... 296 0 0	... 1,294 16 0
Murchison	... 6,518 10 0	... 24,770 6 0
Pilbara	... 2,269 0 0	... 8,669 4 0
Yilgarn	... 1,720 0 0	... 6,536 0 0
July total	... 20,195 8 22	... £76,742 13 10
June total	... 16,128 12 19	... 61,298 16 7
Increase	... 4,066 16 3	... £15,453 17 3

PROVINCIAL SHARE MARKETS.

THE CORNISH MINE SHARE MARKET.

R. SAMUEL JOHN DAVEY, Dealer in Cornish Mine Shares, Redruth, Cornwall, reports under date of September 19 (12 o'clock) as follows:—There has not been much doing in our market this week, and dullness has been the prevailing feature. There is but very little doing to-day: Following are quotations:—Blue Hills, 1s. 6d. to 2s. 6d.; Carn Brea, 1½ to 1¾; Dolcoath, 18s. to 19s.; Dolcoath (partly paid), 5s. 6d. to 6s. 6d.; East Pool, 4½ to 4¾; Killifreth, 9s. to 10s.; South Crofty, 2s. to 2½; South Wheal Frances, 1 to 1½; Tincroft, 6s. to 7s.; West Frances, 1½ to 1¾; West Kitty, 4 to 4½; Wheal Basset, 2½ to 3s.; Wheal Grenville, 12½ to 13½; Wheal Kitty (St. Agnes), 1 to 2½; Polperro, 2s. to 2½.

Mr. MICHAEL WILLIAMS BAWDEN, Mining and Assaying Offices, Liskeard, Cornwall, writes (September 19) as follows:—The mining market is without any change in prices, presenting a dull and monotonous appearance, being devoid of enquiry for shares. Closing prices:—Blue Hills, 2s. 6d. to 3s. 6d.; Carn Brea, 1½ to 1¾; Devon Consols, 30s. to 31s. 6d.; Dolcoath (fully paid), 19s. to 20s. ditto (partly paid), 6s. 6d. to 8s. 6d.; Drakewalls, 1s. 6d. to 2s.; East Pool, 4 to 4½; Killifreth, 10s. 6d. to 11s. 6d.; Levant, 4½ to 5s.; Polperro, 18s. 6d. to 20s.; South Crofty, 8s. 6d. to 10s.; South South Frances, 1 to 1½; Tincroft, 7 to 7½; West Frances, 1 to 1½; West Kitty, 4½ to 4¾; Wheal Basset, 2½ to 3s.; Wheal Grenville, 13 to 13½; Wheal Kitty, 8s. 6d. to 10s.

Messrs. ABBOTT AND WICKETT, Stock and Share Brokers and Mining Share Dealers, Redruth, write under date of September 19:—A quiet market all the week with but little doing, and prices virtually unchanged. Quotations herewith:—Blue Hills, 2s. to 4s.; Carn Brea, 1½ to 1¾; Dolcoath (fully paid), 18s. to 20s.; ditto (5s. paid), 6s. to 6s. 6d.; East Pool, 4 to 4½; Killifreth, 9s. to 10s.; Polperro, 4½ to 5s.; South Crofty, 1 to 1½; Tincroft, 7 to 7½; West Frances, 1 to 1½; West Kitty, 4½ to 4¾; Wheal Basset, 2½ to 3s.; Wheal Grenville, 13 to 13½; Wheal Kitty, 1 to 2½. Tin, 6s.

MANCHESTER.

Messrs. JOSEPH R. and W. P. BAINES, Stock and Share Brokers, Queen's Chambers, 7, Market-street, write September 19 (noon):—Premising that the several departments of rails give an almost unbroken record of higher prices (indeed, the only exception to the rule of any moment is in Canadian Pacifics, which are 2 up), we may pass to the daily details for the week. On Friday (13th inst.) markets were weak all round, and lower prices were general. The changes did not amount to much, however, till near the close, when on receipt of New York opening prices, Yankee Rail's fell away quickly. Mexican Rail's kept up their values pretty well. Saturday found business slack. Prices again tended easier. Home rails did not suffer much, however. On Monday, home rails gave way a little, save for Southern stocks, which marked improved values ranging from ½ to 1. Both Canadians and Americans hung fire all day, or, rather, down to the close, when the temper of the market improved somewhat. Southern traffics announced fairly good, accounting, doubtless, for the strength displayed therein. Tuesday witnessed a change in the general tone of markets. Home rails, though with little doing, were steady. Yankees began better, and maintained advances all day. Canadians had a somewhat similar record to the last-named. Yesterday found home rails offered a bit, and prices, where altered, down about ½ to 1. In Canadians Trunks were enquired for a little resulting in Guaranteed and First Preference quoting ½ and 1, respectively, higher. Canadian Pacifics had a smart rise which was maintained to the finish, when they quoted \$1½ up. Americans came in for some support, quoting advances ranging from ½ to 1. This morning prices did not differ much from last night's close, so changes for to-day will be recorded. Later, the changes in the other departments of the market do not furnish anything calling for special mention. It will suffice, therefore, to call attention to the details of alterations in prices as follows:—

CONSOLS.—Lower : Consols, ½.

COLONIAL STOCKS, &c.—Higher: Cape of Good Hope Inscribed, 1½; CORPORATION STOCKS AND DEBENTURES.—Higher: Birmingham Three and a-Half per Cent., ½; Bradford Four per Cent., 1.

FOREIGNERS.—Higher: Argentine Five per Cent., 1; Mexican Six per Cent., ½; Portuguese Three per Cent., ½; Spanish Four per Cent., ½; Turkish (Ottoman), ¼.—Lower: Brazilian Four and a-Half per Cent., ½; Italian Rentes, ½; Uruguay Three and a-Half per Cent., ½.

BANKS.—Higher: Bank of Bolton, ½; Consolidated, 1-16; London and Midland, ½; District, ½.—Lower: Imperial Ottoman, ½.

INSURANCE.—Higher: Commercial Union, ½; Liverpool, London and Globe, 1; London and Lancashire Insurance, ½ to 1; Manchester Fire, 1-16 to ½; Royal, 1½.—Lower: British and Foreign Marine, ½; Positive, ½.

COAL, IRON, &c.—Higher: Dorman Long, ½; Staveley A, ½; ditto C, 1; Tredegar A, ½; Whitworths, ½.—Lower: Bolckow Vaughan Preference, ½ to ½; Ebbw Vale Steel, 3-16; Rhymney New, 1s.; Sheepbridge A, ½.

TELEGRAPHS AND TELEPHONES unchanged.

MINES.—Higher: Chartered, ½; De Beers, 1.—Lower: Ooregum Ordinary, ½ to ½; ditto Preference, ½; Rio Tintos, ½.—Lower: Aliosoppa, ½ to 2; Threlfall's, ½.

BREWERIES.—Higher: Parkers, ½; Shawell's, ½; Tamplins, ½.—Lower: Allsoppa, ½ to 2; Threlfall's, ½.

MISCELLANEOUS.—Higher: Bell's Asbestos, ½; Brunner Mond, ½; Coats, ½; Crosses and Winkworth, ½; Cunard Steam, ½ to ½; Liverpool United Tramways, ½; Manchester Commercial Buildings, ½; Milner's Safe, ½; Star Paper, ½; Canal Ordinary, 1-16.—Lower: Bodega, ½; Jones' Sewing, ½; Salt Union, 1-16; United Alkali, ½; Railway Debenture Trust, ½; Railway Share Trust A, ½.

LATER (4 p.m.).—Home rails generally a bit "off" to-day, with Scotch stocks in feature of weakness on "strike" rumours.

Americans not moved much either way all day, till just at the finish when New York opening being reported "strong," there was a little move on the buying side. Canadians have weakened slightly. Mexicans are altered.

SCOTCH MINING AND INDUSTRIAL COMPANIES SHARE MARKETS.

STIRLING.—Mr. J. GRANT MACLEAN, Stockbroker and Ironbroker (September 19), writes:—During the past week there has been no particular alteration in prices, although trade reports generally are encouraging.

In shares of coal, iron, and steel companies the principal business has been in Steel Company of Scotland shares, which improved to 95s., but have since declined to 82s. 6d. on strike rumours. Calderbank Steel are at 10s.; Marbella, 63s.; Niddrie, 45s.; Stewart and Clydesdale, 10½; and Shotts, 23.

In shares of copper concerns there is little alteration to notice. It is anticipated there will be a restricted output of the metal through a large interest of the Anaconda Mine being acquired by British holders. Arizonas have improved from 61s. 6d. to 63s.; Central Chilli 10s. 9d.; Mason, Tinto, and Tharsis unaltered.

In shares of gold and silver mines there has been more business doing. The record crushing from the Rand last month has been followed by a recovery in the market. Chartered improved to 8 13-16 and Consolidated 16½, but both are now easier. Among other shares in favour with purchasers at present are East Rand, Benoni, Shebas, and Randfontein. African Recovery improved to 50s. 6d. as it is expected their report will be out this week, and be very good. African Gold Concessions are at 3s. 6d.; Africander 58s.; African Consolidated Land, 4s. 3d.; Achilles 9s. 9d.; Big Blow, 30s.; British Broken Hill, 8s. 6d.; Beaconsfield Diamond, 40s.; Barnato Consolidated, 5s.; Broken Hill, 36s. 6d.; Big Golden Quarry, 2s. 10½d.; Black Flag, 35s.; Consolidated Murchison, 20s.; Coetzee-stroom, 9s. 6d.; Colenbrander, 30s. 6d.; Caratal, 1s. 9d.

Consolidated Western Australia, 21s. 3d.; Crosses, 65s.; Comet 10s.; Eastleigh, 42s. 6d.; Elia, 10s.; Great De Kaap, 4s. 3d.; Golden Feather, 12s. 6d.; Gwelo, 4s. 3d.; Gold Fields Matabeland, 46s. 3d.; Graskop, 9s. 6d.; Hampton Plain, 88s. 9d.; Hauraki, 15s. 3d.; Holcombe, 2s. 9d.; Hammond's Matabeland, 9s.; Jackson's, 2s. 6d.; Klerksdorp, 25s. 6d.; Lake View, 41s. 3d.; Linpanda's Vie, 31s. 3d.; Lomas, 1s. 9d.; Lindsays, 17s. 9d.; Mashonaland Central, 36s. 3d.; Mosman, 5s. 3d.; Murchison Gold Fields, 10s.; Mount Margaret, 30s.; Mysore Wynnaid, 16s. 3d.; Murchison New Cham, 28s. 9d.; Mallina, 18s. 9d.; Nigel Deep, 80s.; New Louis d'Or, 3s. 3d.; Randi, 8s. 9d.; Rand Roodepoort, 11s.; Sheba, 51s.; St. Augustine, 15s.; Southern Goldfields, 4s. 9s.; Taylor's Matabeland, 40s.; United Rhodesia, 29s.; United Langatagie, 65s.; Victoria and Altamira Preference, 2s. 6d.; West Australian Share Corporation, 25s. prem.; Whitehead and Saltan, 2s.; Waterfall, 23s. 9d.; Wealth of Nations, 18s. 9d. prem.; and Wemmer, 11s.

In shares of miscellaneous companies prices are generally higher. Oil companies are exceptionally low, as the masters state, if the shale miners adopt the four-days-a-week policy, the pits must be closed, consequently Broxburn, Pumpherston, and Young's are all lower. Nobels Explosives are at 15s.

EDINBURGH.

Messrs. THOMAS MILLER and SONS, Stock and Share Brokers, 69, Hanover-street, Edinburgh, report as follows under date of September 19:—The market has been somewhat quiet during the past week. In railways Caledonian and North British Ordinary stocks have latterly been depressed. Debenture and other high-class securities have continued to advance in value. In banks British Linen has improved from 393 to 394. National have receded from 339½ to 339. Union from 22 to 21½. Insurance shares have been enquired for at enhanced prices. Liverpool, London, and Globe have improved from 48s. to 50s. Commercial Union from 35 1-16 to 35. London and Lancashire from 16½ to 16 11-16. Northern from 70 to 70½. Royal from 50s to 52s. Scottish Life from 38s. to 39s. 3d. North British and Mercantile have declined from 40s. to 40 3-16. British South Africa shares have risen from 8½ to 8 5-16. Fife Coal shares have advanced 10s. to 18s. Shott's Iron have declined from 24 to 23. Steel shares from 91s. to 81s. Copper shares a little lower. Oil little changed. Broxburn have declined from 13½ to 13 7-16. Linlithgow from 43s. to 42s. Pumpherston from 10 to 9s. Youngs from 55s. 6d. to 52s. Edinburgh United Breweries have improved from 8 9-16 to 8½. Coat's shares have advanced from 27½ to 28½. Scottish Assam Tea from £9 5s. 6d. to 9½.

BRITISH GUIANA'S GOLD INDUSTRY.

THE gold entered on the 22nd ultimo at the Custom House, Georgetown, for shipment per the R.M.S. *Solent*, which sailed that same afternoon, amounted to 4076 ounces 6 dwts. 23 grains, to the value of \$72,542-79, as compared with the previous shipment of 5168 ounces 6 dwts. 6 grains, to the value of \$91,864-07. With this addition the total output for the year amounts to 74,614 ounces 7 dwts. 21 grains, to the value of \$1,322,336-50. The following were the shippers and the amounts of their shipments:—

	Ozs. dwt. grs. Total
The Colonial Bank	1283 0 23
The B. G. Bank	2793 6 0

	Ozs. dwt. grs. Total
	4076 6 23 \$72,542-79

The following is the returns of gold entered at the office of the Department of Mines for the week ending August 24:—

	Ozs. dwt. grs.
Barima	817 3 20
Barama	25 4 20
Cuyuni	595 11 5
Groote Creek	7 15 10
Paruni	102 14 8
Esequebo	676 9 4
Potaro	564 4 22

	Ozs. dwt. grs. Total
	2789 3 17

Export of gold from January 1 to September 2:—

	Ozs. dwt. grs.
1895	74,614 7 21 at \$1,322,336-50
1894	

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RETROSPECTIVE AND PROSPECTIVE.

Extracts and Notes from Mining Operations and Reports on these during the past 25 years.

By WILLIAM GUTHRIE BOWIE.

(Continued from page 1118.)

MONG the works that may be consulted with profit in respect of the geology of Spain—and especially Andalucia—those of Verneuil, Colomb, Ezquerra del Bayo, Casiano de Prado, Schultz, Paillette, Amalio Maestre, Le Play, and Murchison's "Siluria." While the differences of opinion are evident among these, they all admit the impossibility of fixing the relative age of the rocks without personal examination of the fossils of the strata in each district, and correct comparisons. Even Prado estimated the Huelva district as probably Devonian, while inclined to metamorphic and Silurian; and Murchison states, "Whatever be their direction or inclination, the Silurian, Devonian, and Lower Carboniferous rocks of Spain have all been conformably and apparently simultaneously elevated as in France." It has only been after prolonged study as exploitation has advanced that the truer ideas as to the systems in which the cupreous pyrites masses are found have been attained, thanks to the investigations of MacPherson, and the Government geological surveyors Tarin, Mallada, and others connected with the mines in exploitation. Yet there is much still undetermined and doubtful—at least, so far as officially reported, for owing to the difficulties met with, the surveyors have left open to future discoveries many sites, that while classifying them for the present to older systems, are likely to be proved as belonging to more recent geological periods. Thus, they estimate extensions of some of the boundaries, and reductions of some of the others, and confess as to these difficulties. One great difficulty is the way the rocks are altered by metamorphic agencies, and the scarcity of fossils whereby to positively determine these altered portions. In respect of fossils, there is no doubt a scarcity, but this is more owing to absence of time and study to find them, as will be shown in describing the sites where found and being found; but, meanwhile, the Spanish engineers have, besides where it is possible to determine by the reasoning of palaeontology, also determined by that of lithology where the former has been at fault. Certainly a very unsatisfactory determination when the metamorphism of some places is considered, and which the reasonings of lithology would place to older systems, when it is evident by those of palaeontology they belong to more recent ones.

All who are interested and able to peruse the works referred to, and the more recent ones of Professor F. Roemer, Dr. Charles Barrios, Señor Delgado, Grodeck (last edition), Professor Lapparent, Victor Sevoz, M. Paul Choffat, will find in them much valuable information; and although they are contradictory, yet they have a considerable bearing in respect of geological studies in other parts of the world, as well as in the South of Spain and Portugal. The official works of "La Comisión del Mapa Geológico de España, Huelva," by D. J. Gonzalo Tarin, and "Sinopsis Paleontológica de España," by D. Lucas Mallada, are, however, the most modern and detailed, and contain all the latest official *datum* bearing on the geological matter referring to Huelva and Algarve, and for this reason will now be briefly referred to for the sake of assisting those who may not be able to consult these authorities for themselves.

In making this brief sketch, it will be well to bear in mind the nomenclature used is that generally used by Continental geologists and by the authors of these works, many of the names being obsolete among English-speaking geologists—or, at least, considered as indistinct; as, for instance, "plagioclase" is, according to Dana, a convenient term to cover ignorance, and all are at one as to the convenience of "greywacke." Also the geological scheme of these authors is somewhat different in arrangement and nomenclature when compared with British grouping, and will be explained, as far as possible, where necessary. At the same time, it must be remembered that the positive geology of the same is not yet attained; and so soon as the investigations at present being carried out by professors of geology from Germany are completed there will be considerable divergence on some points of interest when compared with the opinions of the authors to whom we for the present refer.

The geological works of the Spanish Government engineers estimate the following geological systems for Huelva and Algarve in descending order:—

Post-tertiary.—Both alluvial and diluvial.

Tertiary.—Pliocene and Miocene.

Triassic.—This is reported by Portuguese geologists as Liassic.

Carboniferous.—Lower coal measures divided in two substrata. The upper substratum the Kiesel Schiefer and grauwacke; the inferior is the same, but estimated as more compact.

Silurian.—Upper Silurian, only group.

Cambrian.—Upper Cambrian, only group.

Metamorphic: This is divided into an upper and lower.	1st upper group	Clay slates. Talco-slates, which is di- vided into two sub- strata—the upper stratum talco-schists, the inferior stratum the same, with more argill- aceous matter.
	Upper	2nd middle group
		Mica schist. Common gneiss Glandulous gneiss, this not being present.
	3rd inferior group	
	1st upper group	
	2nd inferior group	

The hypogene rocks are—

1. Acidic or orthoclase.—Granite, syenite, and porfido.
2. Basic or Plagioclase—(1) Diorite in two varieties; one is called Dioritas Anfibolicas, hence hornblendic diorite, and the other mica-schist diorite. (2) Diabases pyroxenites, which may be considered as augitic diorite. (3) Porfidos diabasicos; in this last the rocks are called porfido as a distinct rock, but will be best known by such terms as porphyritic diorite or porphyritic diabase, perhaps also, as diabase and dolerite are not distinguishable, then porphyritic dolerite.

(To be continued.)

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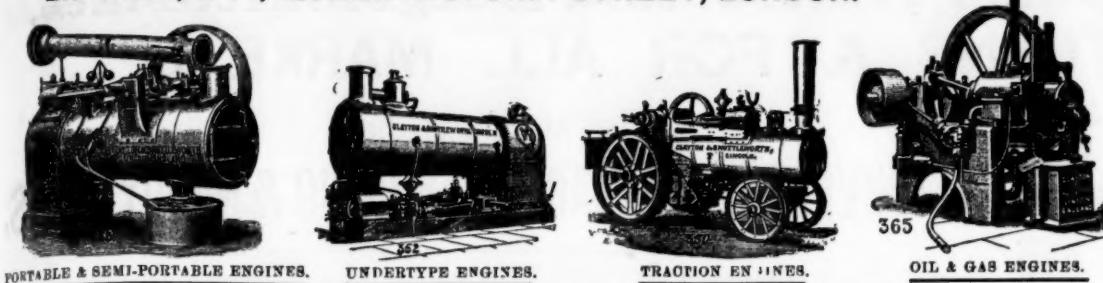
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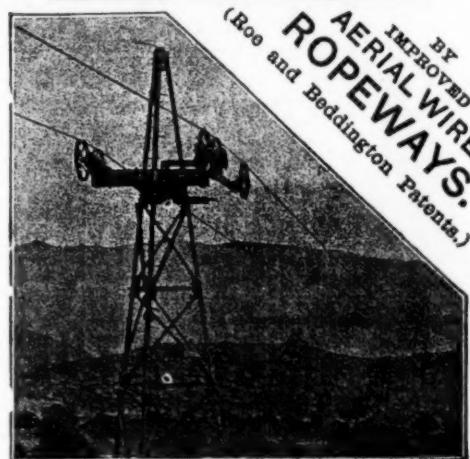


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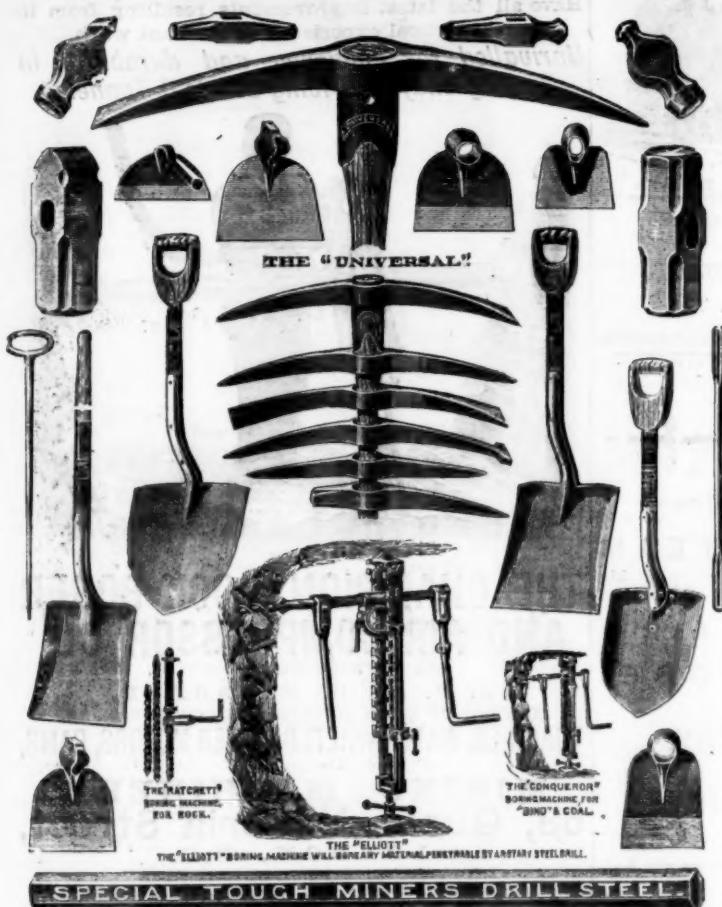
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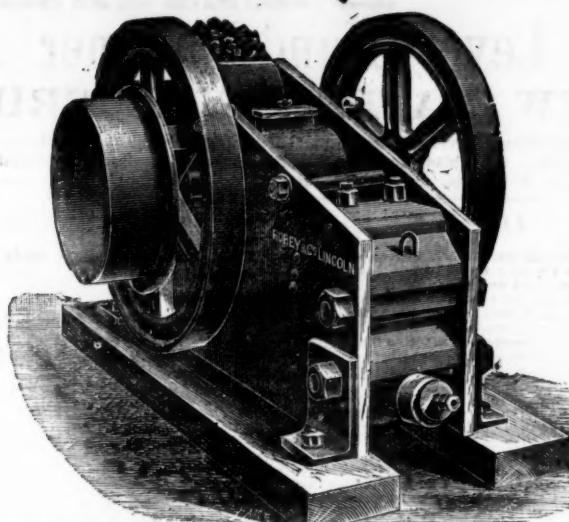
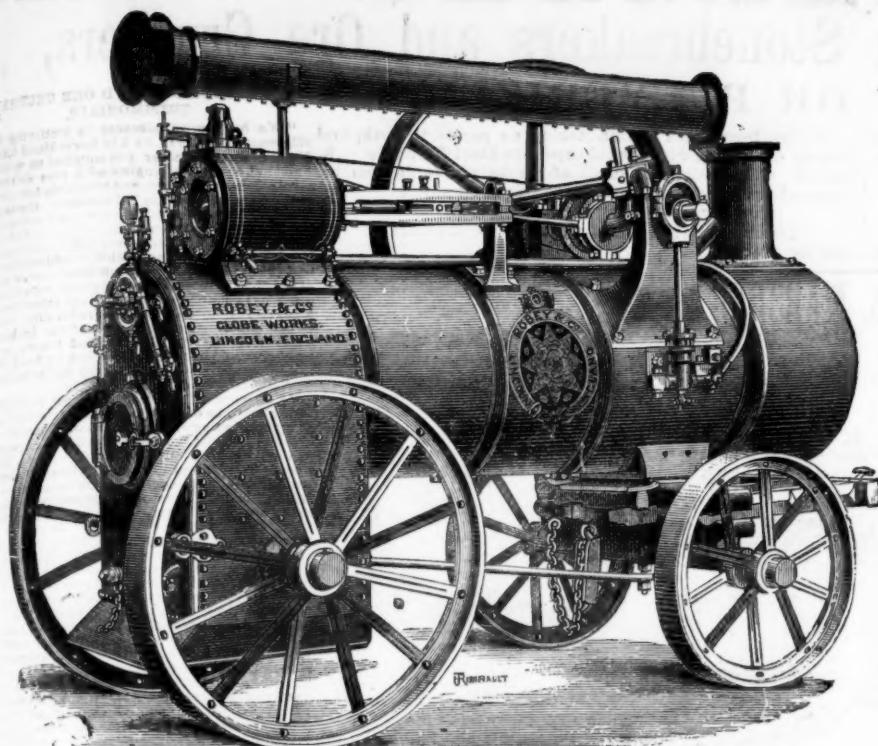
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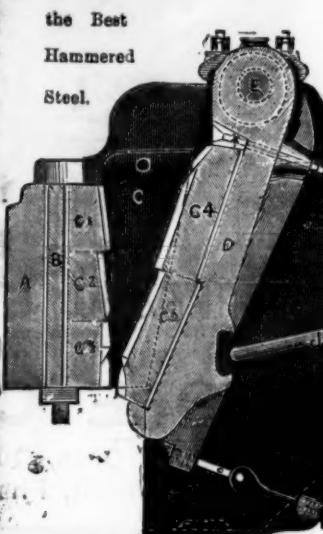
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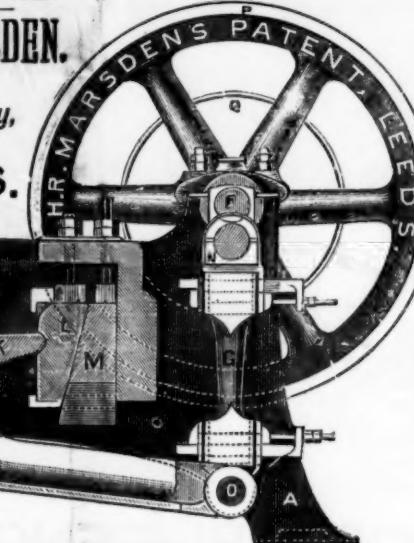
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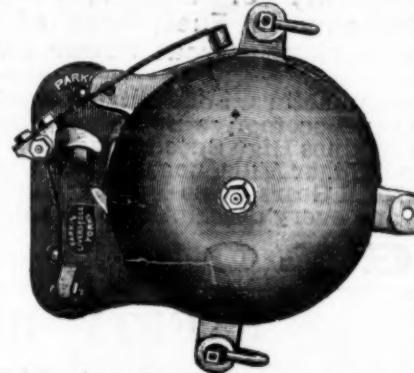
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